

5-2019

Interpretive phenomenological analysis of the interplay of factors affecting burnout in academic medical faculty.

Tara McKinley
University of Louisville

Follow this and additional works at: <https://ir.library.louisville.edu/etd>



Part of the [Higher Education Administration Commons](#)

Recommended Citation

McKinley, Tara, "Interpretive phenomenological analysis of the interplay of factors affecting burnout in academic medical faculty." (2019). *Electronic Theses and Dissertations*. Paper 3219.
<https://doi.org/10.18297/etd/3219>

This Doctoral Dissertation is brought to you for free and open access by ThinkIR: The University of Louisville's Institutional Repository. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of ThinkIR: The University of Louisville's Institutional Repository. This title appears here courtesy of the author, who has retained all other copyrights. For more information, please contact thinkir@louisville.edu.

INTERPRETIVE PHENOMENOLOGICAL ANALYSIS OF THE INTERPLAY OF
FACTORS AFFECTING BURNOUT IN ACADEMIC MEDICAL FACULTY

By

Tara McKinley

B.A., University of Kentucky, 2007

M.A., University of Louisville, 2010

A Dissertation

Submitted to the Faculty of the

College of Education and Human Development at the University of Louisville

in Partial Fulfillment of the Requirements

for the Degree of

Doctor of Philosophy

in Educational Leadership and Organizational Development

Department of Educational Leadership, Evaluation, and Organizational Development

University of Louisville

May 2019

Copyright 2019 by Tara McKinley

All rights reserved

INTERPRETIVE PHENOMENOLOGICAL ANALYSIS OF THE INTERPLAY OF
FACTORS AFFECTING BURNOUT IN ACADEMIC MEDICAL FACULTY

By

Tara McKinley

B.A., University of Kentucky, 2007

M.A., University of Louisville, 2010

A Dissertation Approved on

April 15, 2019

by the following Dissertation Committee:

Jeffrey Sun, JD, PhD

Meera Alagaraja, PhD

Meghan Pifer, PhD

Kyle Brothers, MD, PhD

DEDICATION

This dissertation is dedicated to

David and Madelyn

who supported me the best and fullest ways they know how

and

to all the family and friends

who continually asked and continuously encouraged

ACKNOWLEDGMENTS

I would like to thank my academic and dissertation advisor, Dr. Jeffrey Sun, for his guidance and for ensuring my writing style was always clear and concise.

Additionally, thank you to my other committee members, Drs. Meera Alagaraja, Meghan Pifer, and Kyle Brothers, for your time, expertise, and encouragement to find my own footing as a scholar.

Also, I could not have completed this work without the input and willingness of the faculty participants to share their stories and opinions. Your honest portrayal of the highs and lows of academic medical faculty life gave me a new perspective and encouraged me to share your stories and needs.

ABSTRACT

INTERPRETIVE PHENOMENOLOGICAL ANALYSIS OF THE INTERPLAY OF
FACTORS AFFECTING BURNOUT IN ACADEMIC MEDICAL FACULTY

Tara McKinley

April 15, 2019

This dissertation examines burnout in academic medical faculty. The medical literature reports 30-45% of physicians are burned out and presents a long list of potential drivers of burnout. Interventions have shown limited success at the individual level and greater success at the organizational level, but large-scale interventions are typically time- and cost-intensive. Using the Job Demands-Resources Model (JD-R) and interpretive phenomenological analysis (IPA), this study seeks to present the ways personal, interpersonal, and job characteristics are interpreted as demands or resources by faculty and how those demands and resources work together to drive or mitigate burnout.

Over six chapters, this paper summarizes current literature; discusses assumptions, methodologies, and models; answers three research questions; and positions results within current theory, methods, and practice. Chapter 1 presents a brief overview of the study, including burnout and higher educational theory. The history and context of burnout research, including its growth in medical literature, are summarized in Chapter 2, along with a case for qualitative methodologies. IPA and study methodologies are discussed in additional detail in Chapter 3.

Results are divided into two sections – Chapters 4 and 5 – to explore the depth and richness of each research question. Chapter 4 presents faculty definitions of burnout as well as their opinions about their own burnout. Additionally, academic medical faculty interpretations of personal, interpersonal, and job demands and resources are described. Chapter 5 examines the interplay of these demands and resources between practice settings, specialties, and job roles, in addition to comparison by self-reported burnout level. Using dominant themes and their informant characteristics, a model for the pathophysiology of burnout is proposed. The main themes in this model are expected to transfer between settings, though the unique sub-themes should differ based on context.

Chapter 6 ties the main themes of the model to existing burnout, higher education, and JD-R literature, further making the argument for the validity of the proposed model. Four specific action areas are proposed – barriers to productivity, workload, and climate; collegial culture, leadership, and faculty support; recognition; and existing coping mechanisms – with specific recommendations from the literature.

TABLE OF CONTENTS

Acknowledgments.....	iv
Abstract.....	v
List of Tables	ix
Ch 1: Introduction	1
Traditional Academic Faculty.....	2
Academic Medical Faculty	5
Problem Statement	8
Job Demands-Resources Overview	11
Key Terms.....	13
Significance.....	14
Researcher Positionality.....	15
Limitations	16
Ch 2: Literature Review.....	19
History of Burnout Research	20
Burnout in Physicians	30
Job Demands-Resources Model.....	48
Ch 3: Methods.....	53
Research Questions.....	54
Job Demands-Resources Model.....	55

Methodology	56
Data Collection	61
Validity & Reliability	65
Ch 4: Faculty Interpretation of Burnout, Demands, & Resources.....	69
Research Question 1	70
Research Question 2	76
Ch 5: Interplay of Factors & Their Impact of Burnout.....	124
Research Question 3	124
Model Creation	145
Ch 6: Conclusions & Discussion	151
Fit with Existing Models.....	153
Interpretive Phenomenological Analysis	163
Action Areas	166
Global Evaluation	177
Implications.....	183
Recommendations for Future Research	187
References.....	190
Appendices.....	208
Curriculum Vitae	212

LIST OF TABLES

TABLE	PAGE
1. History of Burnout Research	24
2. Physician Burnout Studies	28
3. Predictors of Burnout.....	30
4. Comparison of Work Areas with JD-R Demands.....	48
5. Faculty Interpretation of Their Own Burnout.....	72
6. Demands and Resources by Self-Reported Burnout Level.....	138

CHAPTER 1: INTRODUCTION

Medical practitioners are often tasked with caring for patients with complex health and social issues. Academic medical faculty also teach learners, perform research, and hold administrative roles. These demands often lead to a stress profile that is different than other professions (Schrijver, 2016). Yet a reliable, scalable intervention for physician burnout does not exist, in part because the current literature does not contextualize results but rather has searched for a one-size-fits-all approach. Not only have these approaches had limited effectiveness, they do not agree with historical approaches to burnout research and effective intervention.

When burnout research emerged in the 1970s, studies described this syndrome using qualitative interviews, observations, and personal stories, and were limited to human services professions. A science boom in the 1980s and 1990s sought to quantify burnout's meaning with specific variables (Maslach, Schaufeli, & Leiter, 2001). Initial research theorized burnout was related to caring too much about patient outcomes and stemmed from dissatisfaction with leadership, subsequent ill intent, and lowered morale (Freudenberger, 1974). Throughout its history, burnout has been inconsistently correlated with workload, time pressure, role conflict, and role ambiguity (Maslach et al., 2001). Though a validated, standardized questionnaire – the Maslach Burnout Inventory (MBI) – exists, studies tend to report most commonly on only one of the three dimensions of

burnout and on social support as the most relevant resource in mitigating burnout (Maslach et al., 2001; Rohland, Kruse, & Rohrer, 2004). Schaufeli, Leiter, & Maslach (2009) guesstimated that by the time of their article publication, over 6,000 publications on burnout would exist.

Traditional Academic Faculty

Faculty burnout is not unique to the medical field. Many of the constructs and patterns discussed in the “Burnout in Physicians” section of Chapter 2 have been studied in traditional academic faculty with similar results. Academic medical faculty work assignments consist of many duties that overlap with those of traditional faculty – teaching, research, community engagement. However, the patient care dimension of the academic medical faculty role is an important one and one that requires knowledge and skills that traditional academic faculty do not have.

Traditional medical faculty reported trouble balancing teaching, research, and community service duties (O’Meara & Bloomgarden, 2011). This lack of balance is often driven by leadership who are focused on a narrow definition of scholarship (O’Meara & Braskamp, 2005) or that are emphasizing values that are different from the organizational mission (O’Meara & Braskamp, 2005; Tierney & Lanford, 2018). Emphasis has also been placed on power dynamics and oppression toward faculty who attempt to improve processes or be innovative (Kezar, 2011). Faculty should be given influence in decision-making and the resources they need; these resources boost intrinsic motivation and drive strategic innovation (Tierney & Lanford, 2016).

In addition to leadership, collegial relationships played a large role in faculty satisfaction. Many liberal arts faculty spoke very positively about their relationships with

colleagues (Pifer, Baker, & Lunsford, 2019). Most faculty reported their closest relationships were with colleagues or with colleagues who were also personal friends (Gersick, Bartunek, & Dutton, 2000). Overall, organization and career satisfaction were positive predictive factors of faculty retention (Smart, 1990).

These characteristics overlap between traditional and medical faculty. In many cases, traditional academic faculty spoke about their jobs as being siloed within their own departments (Pifer et al., 2019). Academic medical faculty, although they have a home department and division, are required often to work in interdisciplinary teams of other practitioners, researchers, or community groups. These differences create additional considerations that may not be present in higher education literature.

Often, professional faculty are more committed, satisfied, and engaged than tenure track faculty because professionalization leads to feelings of appreciation and reward that come from fulfilling their professional duties rather than university salary and tenure (Kezar & Sam, 2011). Academic medical faculty tend to have large portions of their work assignments dedicated to clinical activities, meaning their internal reward from their professional practice should be high. However, defining faculty characteristics using a narrow discipline-related approach like this may be inaccurate since work assignments include different settings and roles outside of clinical care.

Using the theory of academic tribes (Trowler, 2014), the field of medicine could be described as hard, applied, convergent, and urban – meaning theory is well-developed, practice is regulated by an external body, practice standards are relatively uniform, and there is a high level of interaction between researchers/practitioners. I would argue medical education as a research field is soft, applied, divergent, and urban; its practice

boundaries are less clear, and researchers work to change standards. These competing characteristics, when combined with changing characteristics of higher education – intensification of work, loss of collegiality, greedy institutions (Knight & Trowler, 2000) – may exacerbate some of the problems reported in other studies of higher education faculty. This ‘tribes and territories’ approach to academic disciplines focuses on research rather than on professional practice and teaching, leading to further problems with using it as a theoretical example (Trowler, 2012). Existing literature points to role conflict and role ambiguity as drivers of burnout in postsecondary faculty (Sabagh, Hall, & Saroyan, 2018), indicating that interdisciplinarity benefits the organization as a whole but may not benefit the overall well-being of individual faculty members with disparate work assignments.

Gappa, Austin, & Trice (2007) describe organizational characteristics like respect, employment equity, academic freedom, flexibility, professional growth, and collegiality as essential to a high-functioning workplace. Positive outcomes like satisfaction, commitment, sense of meaningfulness, increased diversity, and better utilization of resources stem from organizational factors in addition to individual faculty. These characteristics match with those postulated by scholars in the field of burnout (see Table 4, Chapter 2) and with those studied by Job Demands-Resources (JD-R) scholars. These characteristics, in turn, impact faculty and institutional characteristics in a feedback loop. To change the cycle in an organization, interactional leadership based on collegiality and a shared understanding of organizational values is the recommended approach (Knight & Trowler, 2000). Additional research on leadership and burnout is discussed in Chapter 2.

At the studied university, academic medical faculty, with the exception of those hired decades ago, are non-tenure track faculty. Their job roles consist of patient care and teaching, and some have additional research and administrative components as well. Many faculty members have work assignments that are split between divisions, departments, colleges, or organizations. Recent work points out that higher education is becoming more interdisciplinary in nature because of two major changes: the rise of Mode 2 knowledge and an increased pace of discovery (Trowler, 2012). Mode 2 knowledge is applied, transdisciplinary, and problem-centered; research funding has moved toward this trajectory in recent years, making it impossible for academic organizations to stay in their strict disciplinary silos. Additionally, this interdisciplinary focus has moved knowledge and discovery along at a quicker pace than university structures can accommodate, leading faculty to work collaboratively across these boundaries.

Academic Medical Faculty

Burnout in general practice physicians is thought to range from 23% to 45% (Glasheen et al., 2011; Shanafelt et al., 2012) depending upon specialty, reporting mechanism, and definition of burnout. Burnout has been shown to affect turnover. In a national survey, 14% of academic medical faculty seriously considered leaving their institution, and 21% considered leaving academic medicine altogether (Pololi, Krupat, Civian, & Ash, 2012). Burned out physicians were more likely than their peers to leave their institutions or reduce their workload (Shanafelt et al., 2009). In any given academic year, the average turnover rate in academic medicine is 7% (Smith & Bunton, 2012), indicating about half of faculty who considered leaving actually did, for reasons other

than retirement or completion of a contract term. Replacement costs can top \$115,000 for generalists and \$286,000 for specialists (Smith & Bunton, 2012). Each academic year between 2013 and 2017, the department studied here reported 7-10 voluntary faculty resignations, a turnover rate of about 4-6%, resulting in faculty replacement costs of \$1.7 million per year. Under current budgetary constraints, many of these positions went unfilled, and faculty took on extra work to fill the gaps (K. Miller, email communication, May 2017).

Causes of burnout run the gamut from personal factors like age, sex, and personality characteristics to interpersonal connections with colleagues and leaders to job factors. Job factors tend to fit into one of six broad categories: workload, community, fairness, control, reward, and values (Maslach & Leiter, 2008; Maslach et al., 2001). The stereotypical Type-A personality reportedly seen in fields like medicine – competitive, time-pressured, hostile, need for control – is often linked to stress and exhaustion (Maslach et al., 2001). While a plethora of research exists on causes and predictors of burnout, many studies disagree about whether specific factors are linked to burnout and/or which factors contribute most strongly. One area of consensus, however, is that job factors contribute more strongly than do personal factors (Eckleberry-Hunt, Kirkpatrick, & Hunt, 2017).

Initially, interventions were reactive to the presence of burnout and focused on individual coping skills. Workshops on mindfulness have been shown to decrease perceived stress, decrease burnout, lower anxiety, improve well-being, and increase empathy (Fortney, Luchterhand, Zakletskaia, Zgierska, & Rakel, 2013; Lamothe, Rondeau, Malboeuf-Hurtubise, Duval, & Sultan, 2016). Also, institutions have

implemented health incentive programs, company gym facilities, and wellness challenges to improve employee work/life balance. Often, faculty are aware these interventions exist, but they do not have time to participate (Schrijver, Brady, & Trockel, 2016).

Additionally, physicians may not participate in these interventions for other reasons. One survey of physicians in California reported that 84% rated their own health as excellent or very good, but 34% slept less than 6 hours nightly, 21% worked more than 60 hours per week, 35% report no or occasional exercise, and 28% sometimes or never ate breakfast (Bazargan, Makar, Bazargan-Hejazi, Ani, & Wolf, 2009).

Though institutions are working to decrease the stigma associated with mental health services, negative connotations still exist (Hu, Fix, & Hevelone, 2012), and many state medical boards require physicians to report issues of mental well-being or treatment (Wallace, Lemaire, & Ghali, 2009). Of note, pediatricians were the 4th most likely specialty to seek help, behind psychiatry, plastic surgery, and public health physicians, with 33% reporting help-seeking behaviors (Peckham, 2018), and 18% currently seeking professional help (Kane, 2019). These services could help those with a stress-prone personality – low hardiness, low self-esteem, external locus of control, avoidant coping, neuroticism (Semmer, 1996) – learn to cope by confronting the cause to manage burnout rather than a defensive manner that can exacerbate burnout (Maslach et al., 2001).

Burnout research has not been limited to the field of academic medicine, though that field is the focus of this study. Research in human services is closely linked to the medical literature about burnout, but academic medical faculty occupy a unique space because of their roles as practitioners and teachers. For the same reasons, much of the literature in higher education and organizations provides parameters for traditional

faculty or large organizations, respectively, but does not explain the nuances of medical practice. Key elements of these fields have been considered and will be discussed in Chapter 6, but the focus of this study remains academic medical faculty.

Problem

The field of academic medicine requires its faculty to fill unique roles. Academic medical faculty work assignments include patient care as well as trainee education. Pediatric faculty are expected to stay up-to-date on medical literature, teach learners, and care for children and their families. Often, they are responsible for maintaining their own licensure and credentialing, designing curriculum, meeting hospital care metrics, and being academically productive – tasks a private physician may not be expected to do. The breadth of this job description plus the physical and emotional toll of the job create many areas for conflict or exhaustion to occur. The relationship between these personal, interpersonal, and job factors cannot be effectively studied or intervened upon using surveys, checklists, or other quantitative methods. Trying to do so results in an insurmountable list of possible factors that cannot feasibly be addressed by a single organization, as discussed further in the literature review.

This plethora of burnout drivers presents a problem for a variety of reasons. First, a checklist-style approach to work characteristics forces participants to report only on a pre-defined list of characteristics and does not allow for degrees or types of stressors. For example, Shanafelt, Sloane, & Habermann, (2003) reports sleep deprivation, control over one's environment, and difficult patients contribute to burnout, but how and to what degree these characteristics play a role is not clear. The MBI, the standard research tool, was originally designed for the work environment of health practitioners, but the tool is

often misused as a diagnostic test, and it does not account for factors like technology and administrative burden, factors reported to affect burnout (Linzer, Poplau, Babbott, & Collins, 2016).

Creating a long list of burnout drivers also weakens the ability of organizations to create and implement meaningful interventions. When asked, faculty cite resources like support from peers and leadership, protected time, and recognition of work as the most important factors to combat burnout (Pololi, Conrad, Knight, & Carr, 2009; Schrijver et al., 2016). Common sponsored interventions include workshops and other individual-focused activities, but these fail to address institutional stressors, which are largely the cause of burnout (Eckleberry-Hunt et al., 2017). Despite the fact that personal factors play a smaller role in burnout, most interventions target solely personal factors. Given this mismatch between causes of burnout and intervention targets, it should not be surprising that burnout rates have not improved.

Returning to the qualitative roots of burnout research circumvents many of the issues raised through quantitative measurement tools and misuse of those tools. Qualitative research allows the researcher to explore the nuances of a specific work environment rather than relying on a checklist of factors or a quantitative measurement tool. The interplay of job factors is unique to each setting and may be one of the reasons for inconsistency across studies about the specific causes and predictors of burnout. By understanding the apparent and underlying details of stressors, relationships, and mitigation strategies, more targeted interventions can be designed and implemented that would both address specific causes of burnout and be cost effective for the institution.

Building a more holistic picture of burnout within a specific work unit by understanding the role of work characteristics is the first step toward this goal.

The recommended approach by some scholars is a two-step method consisting of qualitative interviews followed by a customized survey to the broader employee base (Bakker & Demerouti, 2007). Their work used Interpretive Phenomenological Analysis (IPA) for qualitative interviews. This approach builds on phenomenology – studying how participants experience the world and what meaning they assign to those experiences (Pietkiewicz & Smith, 2014) – and relies on the researcher’s knowledge of the field to add an additional layer of interpretation to those experiences (Smith, 2004). For this particular study, my experience in graduate medical education and in a medical setting provides important background information about department culture, leadership changes, structure, etc. that can add to the data to enrich description and detail. The purpose of this study is to understand the interplay of demands and resources that affect burnout and wellness in academic medical faculty at a large research university.

Research Questions

1. How do academic medical faculty define burnout and apply that definition to themselves?
2. How do academic medical faculty interpret characteristics of their jobs as demands or resources?
3. How does the interplay of personal, interpersonal, and job factors impact burnout in academic medical faculty?

Personal factors include demographic and personality characteristics. Interpersonal factors encompass characteristics like connectedness and interactions with colleagues and

learners. Job factors are defined as characteristics of the work assignment itself; for simplicity, Maslach and Leiter (2008) summarized job characteristics into six categories: workload, community, fairness, control, values, and reward.

Job Demands-Resources Model

According to the Job Demands-Resources Model (JD-R), all factors or characteristics of a job are either demands or resources (Bakker & Demerouti, 2007). Job demands are defined as “physical, [psychological], social, or organizational aspects of the job that require sustained physical or mental effort and are associated with physical or psychological costs” (Demerouti, Bakker, Nechreiner, & Schaufeli, 2001, p. 501). In short, demands are job characteristics that contribute to stress at work.

Though the concept of burnout originated in human services occupations, its reach can extend to any occupation where demands are high and resources are limited (Demerouti et al., 2001). As mentioned above, demands can include interpersonal factors as well as work assignment factors (Day & Leiter, 2014). Demands affect workers through two processes: (a) persistent imbalance of demands over resources results in constant overtaxing and exhaustion (EE), or (b) too few resources disable an employee’s ability to meet job demands, resulting in withdrawal and disengagement (DP; Demerouti et al., 2001).

Job resources are defined as “physical, psychological, social or organization aspects that may do any of the following: (a) be functional in achieving work goals; (b) reduce job demands [and] the associated physiological and psychological costs; (c) stimulate personal growth and development” (Demerouti et al., 2001, p. 501). Resources may buffer the effects of demands and have more influence when demands are high (see

Figure 1; Bakker & Demerouti, 2007). Resources can be external – organizational or social factors – or internal – cognitive features or action patterns (Demerouti et al., 2001).

The JD-R is broad enough to encompass a variety of specific job roles and allows for personal interpretation of factors that may be demands for some faculty but resources for others. Other similar theories were too narrow: the Demand-Control Model postulates that strain is caused by high demands + low control; the Effort-Reward Imbalance Model explains that strain is caused by an imbalance of effort and reward (Bakker & Demerouti, 2007). Both models outlined areas of academic medicine that cause and reduce stress, but both only partially explained the interplay between multiple job factors. For these reasons, the JD-R was selected as the conceptual framework for this study.

For this study, defining personal, interpersonal, and job characteristics as either demands or resources forms the basis for determining the way these characteristics are defined in this specific population. By first understanding which characteristics are demands and which are resources, analysis can then move on to describe the way these factors fit to affect burnout in faculty members.

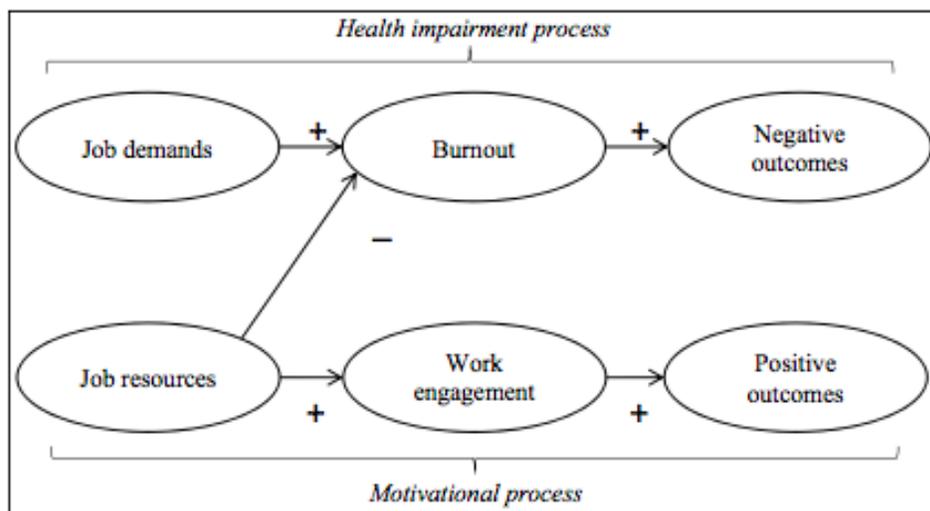


Figure 1. Job Demands-Resources Model. Reprinted [or adapted] from “Applying the Job Demands-Resources Model: A ‘how to’ guide to measuring and tackling work engagement and burnout,” by W.B. Schaufeli, 2017, *Organizational Dynamics*, 46, 122. Copyright 2017 by El Sevier.

Key Terms

Burnout. Burnout is defined as a psychological syndrome that involves a prolonged response to chronic stressors on the job and consists of three domains or subscales – emotional exhaustion, depersonalization/cynicism, and personal accomplishment/effectiveness (Maslach & Leiter, 2008). *Emotional Exhaustion (EE)* “refers to feelings of being overextended and depleted of one’s emotional and physical resources” (p. 498). *Depersonalization (DP)* “represents the interpersonal context dimension of burnout and refers to a negative, callous, or excessively detached response” (p. 498); recently, DP has been replaced with the term *cynicism* within the literature (Leiter & Maslach, 2016). *Personal Accomplishment (PA)* “represents the self-evaluation dimension...and refers to feelings of incompetence and a lack of achievement and productivity in work” (Maslach & Leiter, 2008, p. 498).

Academic Medical Faculty. For the purposes of this research, academic medical faculty is defined as faculty within a single department at a large research university. These faculty have terminal degrees in their fields (M.D., Ph.D.). Work assignments consist of patient care and education; some faculty also have administrative and/or research as part of their work assignment as well.

Interpretive Phenomenology. Interpretive phenomenology is a branch of phenomenology that takes the researcher’s knowledge of the field into account (Smith, 2004). Phenomenology, as a qualitative methodology, strives to explain two facets of an

experience: (a) the participant's reality and (b) how participants make sense of that reality (Smith, 2004). The method is descriptive in that it aims to let the data speak for itself but also recognizes there is no such thing as un-interpreted information (Pietkiewicz & Smith, 2014). As in other phenomenological methods, data is typically collected via semi-structured interview and analyzed in an iterative manner, meaning questions may change as data is interpreted and additional questions or areas of interest arise (Smith & Osborn, 2003).

Significance

This study expands knowledge of current burnout in academic medical faculty by describing the interplay of personal, interpersonal, and job factors as demands or resources within a specific academic setting. By building on quantitative studies about burnout rates and severity within general practice academic fields, a nuanced list of qualitative themes better informs the research process moving forward. Additionally, the project sets the stage for implementing the two-step research process proposed by Bakker and colleagues (2007) at both this and other organizations with academic medical faculty. In practice, the information gleaned in this study can better inform targeted, cost-effective interventions to address specific issues highlighted by the faculty in this single department rather than implementing over-arching, under-utilized, cost-prohibitive wellness interventions.

Dyrbye and colleagues (2017) created a research agenda to move the field of burnout research ahead. Their suggestions included (a) further establishing links between burnout, well-being, and health care outcomes; (b) estimate the economic cost of physician burnout; (c) build alliances to address physician burnout; (d) use common

metrics; (e) develop a comprehensive framework for intervention with individual and organizational components; and (f) share the best evidence. This project has the potential to meet several of these goals. The general framework of factors can be used to understand burnout across all of academic medicine. But in order to understand those factors well enough to develop an intervention, it is necessary to build a highly detailed and specific account of the factors and characteristics contributing to burnout in a particular context.

For furthering the research agenda in this field, the transferability of results should be greater than simply a department-specific set of recommendations. Based on the literature review section of this paper, organization-level factors play a strong role in burnout. Many medical education organizations, departments, and divisions are faced with a common set of stressors: budget cuts, time demands, multiple job roles, quantitative metrics versus qualitative time with learners. Though these study results will explain nuances that are specific to this department, it should be expected that themes will transfer to similar academic institutions. By studying the problem with this qualitative lens rather than defining a list of contributing factors, institutions can replicate the study, create a holistic model of burnout pathophysiology, plan better interventions, and more effectively support their faculty.

Researcher Positionality

My experience in administration means I have a strong understanding of the way university processes and hierarchies work; from a medical education perspective, I regularly see faculty members' commitment to trainee education through innovation, time, and participation in development programs to improve their teaching and scholarly

skills. I was not prepared for the emotion with which faculty described their relationships with patients and families. Faculty chose medicine for these experiences, and they remain at the core of their work lives.

One challenge I have faced throughout this project is drawing the line between researcher and advocate. Faculty shared details of their experiences and their work that surprised me in a variety of ways. Several times during the data collection process, I had to remind myself that my role in this study was to describe and define, not to advocate and correct organization-level problems. Interview sessions also became like therapy sessions for the participants, and a few jokingly asked when our next session could be scheduled after their second interview ended.

Limitations

Because this study takes place in one large department within a single research university, generalizability of the specific interplay of personal, interpersonal, and job factors is limited. However, qualitative research tends to aim for rich and contextualized description rather than direct generalizability to a greater population (Polit & Beck, 2010). This paper describes actions taken to enhance validity in Chapter 3. Additional limitations include lack of burnout scale assessment to determine burnout level of participants as a measure against which to compare question responses. For example, without qualification within the interview transcript, it is unclear whether a demand has contributed to short term stress or presents a longer-term problem. In an attempt to remove this barrier, interviews were spaced approximately six months apart, and questions about demands and resources were repeated at each interview.

One strength of IPA is the use of my knowledge as a filter and enhancer of collected data. However, that I am involved in education and research within the department being studied may result in a selection bias in the representativeness of faculty who respond to recruitment emails. For example, faculty who work closely with the researcher on education research are probably more likely to volunteer first because of familiarity with the researcher and belief in the importance of educational research. The larger sample size is an attempt to recruit participants beyond this limited group.

Summary

Burnout research has cycled through a variety of methodologies and cultural shifts in American society. Faculty burnout has been studied throughout postsecondary faculty, but professionalization and unique job characteristics separate academic medical faculty from their non-practitioner colleagues. Job demands and resources have been studied in multiple faculty contexts and consistently show the relationships between demands, resources, and burnout.

Within medicine, specifically, more than 30% of academic faculty report burnout, and interventions continue to appear in the literature to improve coping skills and influence personal factors. Many of these interventions fail to target burnout's most significant cause – job factors. Quantitative research has developed long lists of burnout drivers but has failed to report on relationships between these drivers and burnout itself, specifically how these characteristics work together to drive or mitigate burnout. By understanding the interplay of personal, interpersonal, and job factors, more effective and targeted interventions can be designed, but developing a more nuanced and accurate interpretation of burnout within a specific context is the first step. The purpose of this

study is to understand the interplay of demands and resources that affect burnout and wellness in academic medical faculty at a large research university.

CHAPTER 2: LITERATURE REVIEW

A leading scholar in the field of physician burnout published a list of characteristics of “happy people” – extroversion, social support system, marriage, religion – and postulated that those who preferred income and prestige over having close friends and a strong marriage were doomed to unhappiness (Shanafelt et al., 2003). Physicians have higher burnout rates than other professions that require a professional or doctoral degree (Schrijver, 2016). In fact, the field of burnout research originated in human services and experienced its greatest research boons in professions that rely strongly on interpersonal relationships (Day & Leiter, 2014).

Burnout is defined as a psychological syndrome that involves a prolonged response to chronic stressors on the job and consists of three domains or subscales – emotional exhaustion, depersonalization/cynicism, and personal accomplishment/effectiveness (Maslach & Leiter, 2008). Burnout is limited to the work environment (Eckleberry-Hunt et al., 2017) and has two distinct contributors: the persistent imbalance of demands over resources and differing personal and organizational values (Schaufeli et al., 2009). Persistent exhaustion tends to manifest itself through depersonalization, most often as a coping mechanism for a lowered capacity to care for others with compassion (Eckleberry-Hunt et al., 2017; Rohland et al., 2004).

Burnout can be individual or socially-constructed (Halbesleben & Leon, 2014). Team-level demands, such as covering for a physician shortage or dealing with a difficult leader, directly influence individual burnout. Collective burnout can stem from a shared event – shared demands/resources, the perception of burnout in colleagues – or from emotional contagion of stressors between employees. Individual burnout can lead to collective burnout, which, in turn, can increase individual burnout. Based on current literature, an exhaustive, yet controversial, list of burnout drivers has been established, but which specific drivers are responsible for burnout in any given situation is not agreed upon. Rather, the interplay of these specific drivers in individual populations is unique (Swensen, Kabacene, & Shanafelt, 2016).

The purpose of this study is to understand the interplay of demands and resources that affect burnout and wellness in academic medical faculty at a large research university. The following literature review summarizes the history of burnout research and discusses measurement tools and scales. Causes and predictors of burnout have been studied in physicians with mixed and conflicting results. Interventions have been conducted at the individual and organizational level, also with mixed effectiveness. Recent research examines the role of organizational culture and support from leadership and peers in the burnout/wellness continuum. The roles of personal, interpersonal, and job factors are intertwined, as are interventions put in place to counteract stressors. Finally, the Job Demands-Resources Model broadly explains the role of job factors as causes or mitigators of stress and burnout in employees.

History of Burnout Research

The history of burnout as a psychological concept and a research topic has ebbed and flowed with the cultural tide since job satisfaction became a construct in the 1930s (Hurrell, Nelson, & Simmons, 1998). The syndrome was described via case study in the literature before it was given the name “burnout” and was described using terms like “exhaustion reaction” (Schwartz & Will, 1953). As medical residency programs proliferated prior to World War II, educational principles like “reflection” and “mindfulness” dotted curricula (Ludmerer, 2014). The bureaucratization of social and human services starting in the 1950s presumably created the large-scale, impersonal organizations that transformed “life callings” into service professions and then into the same “modern workplaces” many white-collar professionals called home (Schaufeli et al., 2009).

The 1960s in the United States was a decade of human services, counterculture, and individualism. In the early 1960s, the government invested tremendously in human service organizations (Schaufeli et al., 2009) – free clinics, halfway houses, crisis hotlines, and organizations to raise awareness of needs and resources (Hoffarth, 2017). The rise of the counterculture eroded the authority of highly-regarded professions like physicians, nurses, teachers, social workers, and police officers; service recipients assumed higher care demands and expectations from these workers (Schaufeli et al., 2009). Along with this erosion came the rise of the “professional mystique” – a sense that professionals’ training and education provided them with a high level of autonomy and job satisfaction, an expectation that put extra pressure on groups like physicians (Cherniss, Egnatios, Wacker, & O’Dowd, 1981). Many Americans who identified with

the counterculture movements found themselves drawn toward the potential to make a society-level difference in these new human services organizations (Hoffarth, 2017). At the same time, American culture continued to undermine community structures like churches and neighborhoods in favor of individualistic, narcissistic ideals (Schaufeli et al., 2009).

On top of these cultural forces, the erosion of social support structures and reliance on individual values only exacerbated the exhaustion and frustration of providers (Schaufeli et al., 2009). It should come as no surprise, then, that “burnout” as a term and a phenomenon, emerged from human services and education professions around this time (Maslach et al., 2001).

During the same time period, research on similar topics – job satisfaction, job environment, and mental health – began to appear in the literature. Though the specific duties of a job were important, the focus of early research was on how employees reacted to stressors and let those stressors impact them psychologically (French & Kahn, 1962). French and Kahn reported on factors like poorly-defined job roles, workload, role conflict, responsibility for others/tasks, job participation, and social support and their roles in mental and physical health. Self-report measures followed in the mid-1960s to help workers assess their own burnout. However, these measures focused mainly on job stressors themselves rather than on workers’ responses to them (Hurrell et al., 1998).

Late in the decade, research interest shifted from studying serious health disorders to studying indicators that led to lower well-being and poor health outcomes. Early markers included anxiety, irritability, frustration, worry, depression, distractedness, and lower ability to concentrate (Hurrell et al., 1998). This early research focused mainly on

the concept of exhaustion in workers and how to recognize its presence but did not include sophisticated methodologies or intervention strategies for individuals or organizations.

The 1970s saw the true birth of scholarship around burnout. This “pioneering phase” of research introduced the concept to the scholarly community, though it was derided as “pop psychology” initially (Maslach et al., 2001). Two authors distinguished themselves as leaders in the field – Herbert Freudenberger and Christina Maslach. Qualitative methodologies replaced self-report questionnaires in an effort to describe burnout in a more holistic way than a list of job stressors (Schaufeli et al., 2009). Intervention strategies began to appear in the literature as well, but the idea that individual employees were the root cause of their own burnout and, thus, expected to mitigate their own situations, persisted (Hoffarth, 2017).

Freudenberger coined the term “burnout” and described it as a work-related syndrome consisting of emotional and physical exhaustion, cynicism toward coworkers and clients, inflexibility, and lowered efficacy (Hoffarth, 2017). Workers were warned to look for anger, irritation, suspicion, paranoia, overconfidence and foolishness in patient care, and having a consistently negative attitude as signs of burnout (Freudenberger, 1974; Maslach, Leiter, & Schaufeli, 2009). Around the same time, Christina Maslach was working to bring the concept of burnout to broader audiences. Rather than relying on her own experience, Maslach interviewed human services workers and noticed they were using the term “burnout” to describe work-related emotional stress (Schaufeli et al., 2009).

Many characteristics of Maslach's study overlapped with Freudenberger's writing: emotional exhaustion as a response to a demanding job and depersonalization (distancing self from clients) as a coping mechanism for workers with frequent contact with demanding patients. Both authors hypothesized burnout was a natural extension of practitioners absorbing their patients' personal and social issues as their own and suggested practitioners find ways to reduce physical and emotional contact with clients and patients as a strategy for limiting the likelihood of becoming burned out (Hoffarth, 2017). Burnout gained status as a scholarly construct and appeared in popular literature publications like *The Washington Post* during this time (Hoffarth, 2017; Maslach et al., 2001).

The individualistic culture that emerged post-WWII continued into the 1980s in an extreme enough fashion that scientific theory said helping others could be detrimental to one's health; psychologists and researchers continued to tout the benefits of individual coping skills (Hoffarth, 2017). Burnout found its place among psychological syndromes within the realm of job stressors, and links were reported between it and job satisfaction, organizational commitment, and turnover (Maslach et al., 2001). Research expanded to fields outside education and human services and included those who worked with other people in a non-service setting: white collar office workers, managers, entrepreneurs, and executives (Hoffarth, 2017).

Toward the late 1970s and early 1980s, research methodologies transitioned from qualitative to quantitative measures, both self-reported and physiological (Maslach et al., 2001). This switch in methodology served to test hypotheses discovered through qualitative methods as well as to develop a measurement tool (Maslach et al., 2009).

Physiological components of stress – blood pressure, heart rate, cholesterol, cortisol, catecholamine, lipids, and insulin – became biomarkers of increased stress and burnout (Hurrell et al., 1998). In 1980, Freudemberger published his first mass-market book, which included a 15-question self-assessment detailing how burnout could happen to anyone and recommending continual monitoring; the field of stress and burnout self-report measures was born (Hoffarth, 2017).

The science boom of the 1980s continued into the 1990s, and burnout research continued to expand. Structural models explaining the pathophysiology of burnout syndrome were the result of more powerful methodologies and statistical tools (Maslach et al., 2001). As a research tool, the Maslach Burnout Inventory (MBI) was introduced in 1981; over the next several years, it became the gold standard of burnout research and was used in well over 90% of empirical studies by the late 1990s (Schaufeli et al., 2009). Longitudinal studies examined links between organizational characteristics at one point in time in relation to individuals' feelings at a later point in time (Maslach et al., 2001). Effects of burnout – physical symptoms, absenteeism, turnover – also appeared in the literature (Maslach & Schaufeli, 1998). Over the course of four decades, burnout had gone from “pop psychology” to an established construct within the field of job stress. A validated measure was used consistently, allowing studies between fields and between time periods to be compared empirically; scholarly literature had accepted its definition, although there was disagreement, as there is in many scientific disciplines.

Societal trends continued toward individualism in the early 2000s, but workers, especially young workers, entered the workforce with better awareness of work

environments since they had broad exposure to television and internet portrayals (Schaufeli et al., 2009).

Additional self-report tools – the Copenhagen Burnout Inventory (2005) and the Oldenburg Burnout Inventory (2002) – continued to appear in the literature but were unsuccessful in unseating the MBI as the tool of choice (Schaufeli et al., 2009). Since 2000, a dramatic increase in publications about burnout in medicine and medical education has been noted. Among these are efforts to shorten the MBI into single-item measures as part of larger work stress surveys (Rohland et al., 2004; West, Dyrbye, Sloan, & Shanafelt, 2009).

During the 2000s, psychology research trends began to shift from negative to positive, and an alternative to burnout became necessary. “Work engagement” was described as the opposite of burnout, and the three burnout subscales became three engagement dimensions: exhaustion/energy, cynicism/involvement, and ineffectiveness/efficacy (Bakker, Schaufeli, Leiter, & Taris, 2008; Maslach et al., 2009). Soon after, the Utrecht Work Engagement Scale was published with similar dimensions (vigor, dedication, absorption; Maslach et al., 2001; Schaufeli & Bakker, 2003).

More recently, the term “moral injury” has been applied to medical professionals as an alternative to the term burnout. Moral injury, most commonly studied in war veterans as a driver of Post-Traumatic Stress Disorder (PTSD), follows an event where an individual was “perpetrating, failing to prevent, bearing witness to, or learning about acts that transgress deeply held moral beliefs and expectations” (Litz, et al., 2009). In applying this term to helping professionals, Sugrue (2019) recommends the term “moral suffering” to indicate a process in which a situation causes moral dissonance and ends

with the provider transgressing his or her own moral code. Though research has trended toward positive or new terminology over the last decade or two, this study will continue to focus on the term “burnout.”

Table 1
History of Burnout Research

<u>Approach</u>	<u>Research Trends</u>	<u>Variable Categories</u>	<u>Measurement Tools</u>	<u>Role of Burnout</u>
Defining a new construct	Job satisfaction, work environment, describing/defining, research within human services	Drivers of poor health, employee reaction to stressors, managing worker/client expectations	Self-report anxiety scales, interviews, observation	“Burnout” enters lexicon as pop psychology, first appearances in scholarly/popular publications
Science boom	Quantitative validation of hypotheses, extension outside human services, structural modeling	Physiologic markers, validated self-report	MBI, physiologic markers	Recognized psychological syndrome associated with job stressors, satisfaction, organizational commitment, turnover
Buzzword research	Increased publications in medicine and education fields about practitioner burnout	Work engagement, positive psychology, search for key drivers of burnout, moral injury	Shortened MBI, customized selection of questions from multiple self-report scales	Quickly became buzzword in education and health care, now becoming overused and poorly defined

While it was a new research construct, burnout was described through qualitative methods like interviews and case studies. Validated quantitative tools and physiological measurements reduced subjectivity and established burnout as a real, measurable psychological concept. Burnout has been well-researched in the field of medicine, with a plethora of studies citing percentages, specific risk factors, and outcomes. Interventions

have been studied at the individual and group level with mixed results. Maslach and colleagues presented areas of work life that are difficult to measure quantitatively (Maslach & Leiter, 2008; Maslach et al., 2001), leaving the field relatively open for qualitative research to describe the nuances, barriers, and organization-specific interventions.

Maslach Burnout Inventory. Capturing the multiple dimensions of burnout proved to be a difficult task throughout the infancy period of measurement. However, in 1981, the MBI was published. This tool measured three distinct subscales of burnout – emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA; Maslach & Jackson, 1981; Maslach et al., 2001; Schaufeli et al., 2009). The assessment was originally designed for health and human services, though an educator version and a general survey have also been created (Maslach et al., 2009). By the late 1990s, the MBI was used in more than 90% of burnout research (Schaufeli et al., 2009).

Though the MBI is a validated research tool, it has become prone to misuse through tool modification, scale manipulation, and other study protocol that may provide misleading or invalid results. To broaden the scope of studies about workplace stress, some researchers shorten the MBI tool or alter its questions to better fit the needs of larger projects. Published reports on shortened versions of the MBI report moderate to high correlations between shortened and full versions (EE, $r = 0.76-0.83$, p value not reported; DP, $r = 0.61-0.72$, p value not reported; West et al., 2009).

The MBI was designed as a research tool to report three levels – high, moderate, low – on three dimensions of burnout – emotional exhaustion, depersonalization, personal accomplishment (Maslach et al., 2009). However, studies often report results as

burned out or not by assigning an arbitrary score cutoff and/or reporting on *either* EE or DP instead of *both* EE and DP, as the tool defines (Eckleberry-Hunt, Kirkpatrick, & Barbera, 2018). Reporting this way tends to skew results toward higher levels of burnout and lumps all burnout into a single category.

One criticism of the MBI as a burnout measurement tool is it does not account for increasing administrative burden as a prominent work factor (Maslach et al., 2009), though faculty reported administrative functions as causes of stress and burnout (Davis, Hill, Fisher, Nick, & Ward, 2015; Dyrbye & Shanafelt, 2016; Linzer et al., 2016; Peckham, 2018; Schrijver, 2016). The increasing role of electronic health records (EHR) and administrative duties often came as the result of organizational practice changes – large practice groups, hospital-owned practices – and directly undermined the institutional values and passions for which academic medical faculty became physicians in the first place. This mismatch in values also created workplace stress (Maslach & Leiter, 2008) and, in turn, led to additional burnout.

Initial descriptions of the construct of burnout emerged from practitioners working closely with impoverished or needy clients and from scholars who saw the effects of social challenges in others. As burnout gained recognition in both popular and scholarly publications, its study became more science-driven through the use of validated measurement tools and physiologic markers. This scholarly structure allowed for comparison and generalizability and helped burnout spread to contexts outside of human services to fields like management and medicine. Once scholars began to alter this validated tool to fit their own individual needs, its validity should have been called into

question. The result is skewed or misrepresented data that may or may not be comparable or generalizable as intended.

Burnout in Physicians

Studies about burnout in physicians have aimed to measure prevalence in a variety of medical populations, predict causes, explain effects, and outline interventions, as discussed throughout this section. Many studies used some variation of the MBI, though they used a variety of MBI scores to denote burned out versus not burned out (see Table 2; high emotional exhaustion (EE) and depersonalization (DP) scores are noted when provided). The studies reported in Table 2 used pediatricians (the group studied here), general practitioners (pediatricians, internal medicine, family practice), or surveyed all specialties nationally. The variety of participant groups and measurement methods used illustrates the lack of standardization and consistency that have resulted from alteration of the MBI.

Pediatrics, the specialty studied here, tended to have lower levels of self-reported burnout (Parks, 2017). This report from the American Medical Association showed an increase from about 35% to about 45% burnout in general pediatricians between 2011 and 2014. Pediatrician self-reported burnout at similar rates in 2018 and 2019 – 44% and 41%, respectively (Kane, 2019; Peckham, 2018).

Table 2

Physician Burnout Studies

<u>Author</u>	<u>Population</u>	<u>Academic/Non-academic</u>	<u>Measurement Tool</u>	<u>Results</u>
Glasheen et al., (2011)	Hospitalists nationally	Academic	Self-report single burnout question	23% burned out
Linzer et al. (2016)	Internal medicine practitioners nationally	Academic	Mini Z self-report single burnout question	38% symptoms of burnout

Dyrbye et al. (2011)	Internal medicine single institution	Academic	2-item MBI variant	31% experienced burnout at least once/week; 9% more callous at least once/week
Shanafelt et al., (2012)	Physicians all specialties nationally	Mixed group	2-item MBI variant	45.4% burned out (38% high EE, 29% high DP)
Shanafelt et al., (2016)	Physicians all specialties nationally	Mixed group	Full MBI	55% burnout (47.7% high EE, 35.2% high DP)
Peckham, (2018)	Physicians all specialties nationally	Mixed group	Not reported	46% burnout (42% of pediatricians)
Shanafelt et al., (2009)	Physicians at single institution	Academic	Full MBI	34% burnout (30.2% high EE, 13.3% high DP)
Davis et al., (2015)	Pediatricians at single institution	Academic	Full MBI	94% burnout (64% high EE, 90% high DP)
Windover et al., (2018)	Physicians at single institution	Academic	Full MBI	35% burnout

Table 2 shows a relatively stable burnout prevalence among general practice health care providers, with the exception of the Davis et al. (2015) study. Unfortunately, this study is one of the very few that looked at burnout specifically in pediatric faculty. The other outlier, Shanafelt et al. (2016) reported a 55% faculty burnout rate; however, looking at the individual dimension scores for EE and DP in light of more accurate MBI reporting, the burnout percentage would fall more in line with other studies at 30-40% burnout.

Freudenberger (1974) wrote descriptively about his own experiences with burnout and postulated its causes within this field. The same explanatory drive existed within medicine, though largely quantitative research methods resulted in a list of predictors or drivers of burnout. Predictors of burnout were wide-ranging in the literature. Personality

and demographics played a role, as did interactions with peers and patients. By far, the largest source of burnout predictors were organizational factors (see Table 3). Of note, situational factors – work environment, relationships – tend to play a larger role in burnout than do individual factors (Eckleberry-Hunt et al., 2017).

Table 3

Predictors of Burnout

	<u>Predictor</u>	<u>Work Area</u>	<u>Citation</u>
Personal Factors	Demographics (white, younger, female, generalists)	n/a	Shanafelt et al., (2009) ¹ ; West et al., (2018) ¹ ; Windover et al., (2018) ²
	Personality, compassion, altruism, perfectionism, coping skills	n/a	McClafferty & Brown, (2014) ² ; Shanafelt et al., (2003) ¹
Interpersonal Factors	Connectedness, interactions with colleagues and patients	Community	Glasheen et al., (2011) ¹ ; Schrijver, (2016) ¹ ; West et al., (2018) ²
Job Factors	Overall workload, clinical workload, unrealistic expectations	Workload	Davis et al., (2015) ¹ ; Dyrbye et al., (2011) ¹ ; Linzer et al., (2016) ¹ ; McClafferty & Brown, (2014) ² ; Peckham, (2018) ² ; Seritan, (2013) ² ; Shanafelt et al., (2003) ² ; West et al., (2018) ² ; Windover et al., (2018) ¹
	Administrative responsibilities, tech, EHR, staffing shortages	Workload	Davis et al., (2015) ¹ ; Linzer et al., (2016) ¹ ; Peckham, (2018) ² ; Schrijver, (2016) ² ; Shanafelt et al., (2016) ² ; Sinsky et al., (2017) ²
	Lack of control/autonomy over schedule/environment, lack of flexibility	Control, Fairness	Davis et al., (2015) ¹ ; Glasheen et al., (2011) ¹ ; Keeton et al., (2007) ² ; Linzer et al., (2016) ¹ ; Peckham, (2018) ² ; Schrijver, (2016) ¹ ; Schrijver et al., (2016) ² ; Seritan, (2013) ² ; Shanafelt et al., (2003) ² ; West et al., (2018) ²
	High demand on personal time, work/life balance, work/home conflict	Workload	Davis et al., (2015) ¹ ; Dyrbye et al., (2011) ¹ ; Glasheen et al., (2011) ¹ ; Linzer et al., (2016) ¹ ; Schrijver, (2016) ² ; Shanafelt et al., (2003) ² ; West et al., (2018) ²
	Poor values alignment, poor job fit	Values	Linzer et al., (2016) ¹ ; Schrijver et al., (2016) ¹ ; Seritan, (2013) ² ; Shanafelt et al., (2009) ¹

Unsupportive environment, lack of strong leadership, effort/reward imbalance

Community, Reward, Values

Linzer et al., (2016)¹; McClafferty & Brown, (2014)²; Peckham, (2018)²; Schrijver et al., (2016)²; Seritan, (2013)²; West et al., (2018)²

¹ Denotes study of academic faculty; ² Denotes study of non-academic/mixed group physicians

Drivers of burnout did not differ between studies of academic and non-academic physicians. Examining the above predictors, none are specific to academic medicine apart from a higher percentage of time in the academic job description likely devoted to teaching and administrative responsibilities. Teaching learners or preparing education materials was not reported as a driver. Alternatively, academic faculty reported relationships with learners as a protective factor against burnout (Pololi, Kern, Carr, Conrad, & Knight, 2009), as discussed in more detail later in this review.

One national survey of nearly 7,000 practicing physicians in multiple specialties and practice settings (academic and non-academic) showed academic physicians were significantly less likely to be burned out than private physicians (OR 0.692; 95% confidence interval [CI] 0.604 – 0.792; $p < 0.001$; Shanafelt et al., 2016). On the other hand, among academic faculty, 26.4% of those who felt they spent too much time teaching expressed intent to leave their institutions in the next 1-2 years (Pollart et al., 2015).

Burned out physicians – men and women – were more likely to leave their institutions, or at least reduce their workload, than those who were not burned out (Shanafelt et al., 2009; Sinsky et al., 2017), especially if emotional exhaustion (EE) scores were high (Windover et al., 2018). A national survey of academic medical faculty reported 14% seriously considered leaving their institutions, and 21% seriously

considered leaving academic medicine within the previous year (Pololi et al., 2012). Similarly, a national survey of all physicians – academic and non-academic – showed 26.6% of physicians were likely or definitely leaving their current practice in the next two years, and nearly 20% were likely or definitely reducing their clinical hours over the next 12 months (Sinsky et al., 2017). A longitudinal study at a single, large, academic institution correlated a higher EE score on the MBI with a higher likelihood of reducing full-time employment (FTE; 43% per one point increase) but noted the cynicism dimension did not affect FTE reduction (Sinsky et al., 2017). Family care issues (i.e. having children at home) did not influence burnout or intent to leave (Beckett, Nettiksimmons, Howell, & Villablanca, 2015; Dyrbye, West, Satele, Sloan, & Shanafelt, 2011; Pololi et al., 2012).

The literature tends to agree about the effects of burnout on individuals. Burnout can cause physical aches and pains, digestive upset, poor sleep quality, impaired immune function, and elevation of cardiovascular disease risk. In addition, emotional effects including fatigue, unusual behaviors, mental illness/depression, and poor work performance have also been noted (Chrousos, 2009; Dyrbye et al., 2014; Eckleberry-Hunt et al., 2009; Juster et al., 2011; Landrigan et al., 2008; Maslach & Leiter, 2008; Olson, Kemper, & Mahan, 2015; Stucky et al., 2009). Organization-level effects like faculty turnover and lower engagement in teaching residents and students have also been noted (Scheepers, Arah, Heineman, & Lombarts, 2015; van den Berg, Bakker, & ten Cate, 2013; van den Berg et al., 2015). Turnover often leads to more burnout as faculty work to fill gaps left by vacated positions, which, in turn, leads to more turnover (Schrijver, 2016).

The factors listed in Table 3 illustrate the exhaustive nature of burnout drivers found in previous studies. These factors can be combined into buckets or themes to better understand the breadth of findings. One option is to use an existing schema - six areas of work life Maslach and colleagues describe as contributing to burnout (Maslach & Leiter, 2008; Maslach et al., 2001):

- Workload (EE): higher workload without adequate time to recover, wrong type of work for personality, emotionally-heavy work can lead to burnout
- Community (EE): positive connections, support systems, sense of belonging combat burnout; chronic, unresolved conflict can lead to burnout
- Fairness (EE/DP): perceived inequity in decision-making and compensation is often viewed as a lack of respect and lower self-worth; fairness is often the quality that tips the scales toward or away from burnout
- Control (PA): lack of control over job duties, schedules, and other job roles; lack of resources; lack of authority to do a job contribute to higher burnout scores
- Reward (PA): lack of recognition/reward for efforts may be related to higher burnout scores
- Values: mismatch in principles or career aspirations leads to a lack of organizational commitment and can affect burnout levels

However, burnout drivers may not fit neatly into these six categories.

Instead a three-factor approach more accurately describes and simplifies the list. Personal factors include personality traits and demographics. Interpersonal factors include connectedness to others and interactions with patients or colleagues. The largest category, by far, is job factors, which encompasses characteristics like workload,

administrative responsibilities, control, flexibility, job fit, and leadership. Moving forward, literature will be organized using these three categories.

Personal Factors. Research on personal factors is mixed. Some studies reported higher levels of burnout linked to race (white, Windover et al., 2018), age (younger, West, Dyrbye, & Shanafelt, 2018; older, Shanafelt et al., 2009), gender (female, Shanafelt et al., 2009; West et al., 2018), and practice specialty (generalists, Shanafelt et al., 2009). Additional studies found no association between burnout and sex or age (Dyrbye et al., 2011; Shanafelt et al., 2003). Personality traits like competitiveness, need for control, and perfectionism have been linked to higher rates of burnout (Maslach et al., 2001; McClafferty & Brown, 2014), but these traits are difficult to study.

Women, in particular, had high levels of turnover in academic medicine, a documented effect of burnout (Pololi et al., 2012; Shanafelt et al., 2009). Women were more likely than men to pursue careers in academic medicine but were also less likely to be promoted, hold leadership positions, publish, and receive research funding (Levine, Lin, Kern, Wright, & Carrese, 2011). These factors - in addition to a lack of role models, frustration with the institutional environment, misalignment with institutional values, and feelings of being devalued – played a significant role in women leaving academic medicine. Many of these factors overlapped with those reported as burnout factors in other studies.

Personal factors have been shown to play a role in burnout, but disagreement about which factors do or do not contribute exists. Personal factors play a smaller role than other factors (Eckleberry-Hunt et al., 2017). Nonetheless, many interventions address personal factors.

Many institutions have added health incentive programs, company gyms, and other institution-wide wellness initiatives for students, staff, and faculty. Academic medical faculty report a lack of time to participate in these activities even though they are aware they exist (Schrijver et al., 2016). Though not specific to academic medical faculty, studies report physicians overwhelmingly rated their own health as excellent or very good (84%; Bazargan et al., 2009). Nationally, pediatricians reported healthy coping mechanisms like talking with friends and family (54%), exercise (51%), and sleep (43%; Peckham, 2018). However, physicians also slept less than 6 hours per night (34%), worked more than 60 hours per week (21%), skipped breakfast (28%; Bazargan et al., 2009), ate junk food (38%), isolated themselves from others (35%), and used alcohol/drugs/tobacco to cope (22%; Peckham, 2018).

Individual-level interventions typically include skills training in mindfulness, coping skills, and/or stress reduction. Just as the field of medicine has shortened the MBI to accommodate specific study parameters, intervention programs have also been shortened to accommodate busy schedules. The Mindfulness-based Stress Reduction program was designed to be eight weeks in length and include 30 hours of content, including workshops and a full day of practicing mindfulness. Shortened versions condense this content into 4-6 week sessions (Lamothe et al., 2016), weekend retreats (Fortney et al., 2013), or even a 90-minute mindfulness and breath meditation session (Sood, Prasad, Schroeder, & Varkey, 2011). Participants self-reported improved resilience scores, less stress and anxiety, increased mindfulness, and increased empathy eight weeks (Fortney et al., 2013; Sood et al., 2011) and nine months (Fortney et al., 2013) after condensed training. A review of mindfulness-based stress reduction programs

noted no long-term follow up after workshops and training programs (Lamothe et al., 2016).

Personal factors drive burnout, but their role is not clearly understood. Personality and coping skills may also play a role. Individual-level interventions typically teach coping skills to help faculty reduce their own stress levels. These activities have resulted in improved scores on stress- and job-related measures. Academic medical faculty do not practice in vacuums, so interpersonal and job factors should also be considered when studying and intervening with burnout. One author explained, “although most efforts at preventing physician burnout are focused on improving individual resilience, health care organizations are failing to change the system that is increasingly asking doctors to perform tasks, largely administrative in nature, for which they have no passion” (Squiers, Lobdell, Fann, & Dimario, 2017, p.1120).

Interpersonal Factors. Interpersonal factors include characteristics like connectedness and interactions with others. Literature about the role of interpersonal factors mostly agreed that positive experiences buffer against work stressors, while negative experiences drive burnout.

Positive work relationships served as a buffer against dysfunctional job characteristics like racial and gender bias, self-promotional culture, fear of retribution/retaliation from supervisors, and isolating effects of clerical/administrative work (Pololi et al., 2009a). These relationships promote belongingness, being connected to others through relationships; nurturing, loving, liking, caring, cooperating; and esteem, having a social standing of respect and admiration (Forbes, 2011). Faculty valued relationships with trainees and patients and talked about collaboration with colleagues as

protective factors of their work lives (Pololi et al., 2009a). Protective factors are those job characteristics which protect against the effects of job demands.

In other cases, faculty feared retaliation from leaders and colleagues for talking about stressors and negative aspects of the work environment (Pololi et al., 2009a). Nearly half of surveyed faculty at one institution expressed concern about their colleagues' reactions if they took family leave (Beckett et al., 2015). In less egregious acts of unsupportive behavior, many faculty engaged in incivility: low-intensity, discourteous behavior toward colleagues. These acts were in person and electronic and were far more frequent than flagrant disrespect. They also led to higher burnout scores (EE and DP) over the course of one year (Day & Leiter, 2014). Though negative work relationships have been shown to contribute to burnout (Pololi et al., 2009a; Pololi et al., 2012; Schrijver et al., 2016), positive relationships with colleagues can counteract burnout and promote wellness and engagement.

Clear evidence exists that positive interpersonal experiences buffer other stressors, and negative personal experiences can increase stress and lead to burnout. Interventions at this level typically involve building community and support systems. Mentoring programs have been shown to lower intention to leave and raise self-efficacy in career development (Pololi et al., 2015). Building support and community is vital, but these efforts do not address the largest group of characteristics driving burnout in academic medical faculty: job factors.

Interventions targeting interpersonal factors are considered organization-level. Many of these involve building community and support systems, thereby improving interactions and buffering against stressors. Learning communities comprised of faculty

and medical students were studied over five different university campuses. The vast majority of faculty participants reported increased job satisfaction, increased sense of belonging, and less intention to leave their institutions. However, financial support and protected time were essential to the success of these groups (Wagner, Fleming, & Moynahan, 2015).

Formal mentoring programs for junior faculty have shown success in offering guidance for academic promotion, engagement, and role modeling (Chen, Sandborg, Hudgins, Sanford, & Backrach, 2016; Schor, Guillet, & McAnarney, 2011). A national survey of academic medical faculty showed only 30% of faculty were satisfied with the quantity and quality of current mentorship opportunities and reported mentorship was associated with increased perception of institutional support, self-efficacy in career development, trusting relationships, and a lower intent to leave (Pololi et al., 2015).

Formal mentoring programs included either a single mentor from a division outside a junior faculty member's own or a committee; programs required mentees to meet with their mentors regularly until they went up for promotion. Faculty appreciated having an additional point of view about their careers (Schor et al., 2011), and many continued the relationship after requirements ended (Chen et al., 2016).

Building community to talk through stressors and learn coping skills was shown to be effective in a small group setting as well. Physicians reported increased feelings of empowerment and engagement, as well as a 15% decrease in depersonalization (DP) scores after weekly small group discussions about personal, patient care, and work-life balance concerns (West et al., 2014). Faculty were given protected time for weekly

participation. No significant differences were noted in perceived stress, depression, quality of life, job satisfaction, overall well-being, fatigue, or empathy.

Scholars noted concern that individual-level interventions have the potential to increase burnout if implemented as a sole strategy because physicians may view them as one more item on their task lists (Callahan, Christman, & Maltby, 2018). However, since burnout is comprised of both individual and environmental factors, newer research suggested a combined approach is a more effective option (Squiers et al., 2017; West et al., 2018). In the literature, both individual, coping skill workshops as well as group, institution-sponsored, longitudinal programs have shown to be effective (Schrijver, 2016). Notably, multi-faceted, organization-directed interventions had larger effects than individual-level programs regardless of topic or frequency of delivery (Panagioti et al., 2017). Research on interventions began to appear much later than research on burnout and has only recently been able to home in on comparisons between types and topics of intervention.

When asked about their reasons for leaving their institutions, faculty suggested less reliance on metrics, more control over their own schedules, adequate support staff, leadership transparency, support and recognition for teaching and professional development, and explicit support for work/life balance as ways to combat job stressors (Linzer et al., 2016). Of note, these suggestions are all job factors rather than personal or interpersonal factors. Each institution has its own unique set of job factors and interplay between those factors based on institutional culture. This balance of factors, in addition to individual stressors and coping skills, contributes to burnout and wellness in academic

medical faculty. Exploring the balance of these factors helps create a unique model for specific divisions, departments, or an entire institution.

Job Factors. The largest category of factors is job factors. Reviewing Table 3, the reader can see this exhaustive list includes nearly every facet of the work assignment of an academic medical faculty member. Research disagrees on whether or not many of these characteristics actually drive burnout. A wide array of evidence points toward these characteristics as burnout drivers, but other studies found no correlation between burnout and service time or number of overnight calls (Dyrbye et al., 2011) or work/life balance (Eckleberry-Hunt et al., 2017). Research on electronic health records (EHR) and other administrative duties as factors that promote burnout reported each hour of patient care resulted in 1-2 hours of administrative work (Eckleberry-Hunt et al., 2017).

One explanation for the variety in reported characteristics is differences in organizational structure, function, personnel and resources. For example, an organization that places emphasis on scheduling flexibility to promote work/life balance, as described in Eckleberry-Hunt et al. (2017), would not likely report these characteristics as drivers of burnout. But an organization that does not value these characteristics might report them as stressors, as did several studies in Table 3.

Maslach and colleagues posed values alignment as a key driver of burnout in the workplace (Maslach & Leiter, 2008). Physicians typically chose careers in medicine to take care of patients and academic medical settings for the core values common to most institutions: clinical care, social mission, medical education, and intellectual discovery (Pololi et al., 2009b). In most cases, physicians engaged with the patient care values of

the institution but had trouble engaging in other values (education, community, intellectual discovery; Swensen et al., 2016).

Often, this lack of engagement was due to discord between stated values and observed behaviors within the institution. Faculty reported institutional betrayal of the public trust, not being adequately supported for clinical care activities, lack of caring about community engagement, inadequate support and recognition for medical education, unethical behavior condoned by senior faculty, and felt that self-promotion was vital to success (Pololi et al., 2009b).

Scholars report that financial challenges in health care are often taken out on academic medical faculty through increased productivity, increased efficiency, and decreased expenditure expectations (Shanafelt & Noseworthy, 2017) – basically, do more with less. More recent work adds that the “lack of significant change within the health care system results from a lack of proper organization incentivitation rather than from an incomplete academic understanding of the problem and potential solutions” (MacKinnon & Murray, 2018, p. 124). Basically, because there is no incentive to solve the problem, those in the trenches – medical faculty – are not choosing to spend their few resources on activities other than patient care or other activities that provide meaning. These specific factors appeared in multiple studies that made suggestions for improvement of well-being (Linzer et al., 2016; Schrijver et al., 2016; Shanafelt et al., 2003).

Misalignment in values contributes to workplace stress (Seritan, 2013) and to faculty physicians’ intention to leave their institutions and academic medicine altogether (Pololi et al., 2012). Many of these values are managed and overseen at the division and

department level. Division chiefs and department chairs cannot control the actions of the greater university, but they can influence the image and activities of the entities they lead.

Not surprisingly, several studies associated positive experiences with leadership with lower levels of burnout and with a buffering effect on demands (Day & Leiter, 2014; Schaufeli, 2015; Shanafelt et al., 2015). Leadership style contributed directly to employee satisfaction, commitment, well-being, performance, and turnover (Breevart, Bakker, Hetland, & Hetland, 2014). For each one-point increase on a composite leadership scale, faculty physicians at Mayo Clinic were 3.3% less likely to be burned out; in fact, 11% of the variance in burnout score was explained by leadership score of a direct supervisor (Shanafelt et al., 2015).

Engaging leaders – those defined as constructive or transformational leaders – increased work resources more than they decreased work demands (Schaufeli, 2015). Constructive leaders stimulated well-being and motivation and contributed to goal achievement. Transformational leaders increased productivity, commitment, satisfaction, and engagement (Breevart et al., 2014). To have the most impact, leaders treated their employees like partners instead of employees and removed barriers to engagement, committed to administrative support, and offered protected time for faculty development (Swensen et al., 2016). Scholars in the field have suggested supervisors use the required academic medical faculty annual review to recognize individual contributions, be transparent about challenges, allow faculty to give ideas for solutions, and promote professional development (Shanafelt & Swensen, 2017).

Poor leadership directly contributed to stress and burnout. Abusive leaders who blamed, broke promises, and inappropriately directed anger contributed to employee

burnout, but only when employees under the abusive leader supported each other and only in the EE and DP dimensions; an abusive leader did not affect employees' views of their own accomplishments (Breevart et al., 2014). Passive-avoidant leaders – those who were absent when needed and avoided decisions and employees – fostered bullying and conflicts with colleagues (Breevart et al., 2014).

Job factors outside of organizational culture are often difficult or impossible to change simply due to the number of stakeholders involved – patients, hospital systems, reimbursement organizations, universities, etc. Interventions targeting these job factors do appear in the literature and are uniquely targeted to a specific driver or practice unit, in contrast to some of the larger interventions discussed previously.

One academic medical institution improved electronic health record (EHR) functionality to reduce time charting per patient with the goal of eliminating charting from home (Webber, Schaffer, Willey, & Aldrich, 2018). Outpatient clinic faculty reported less charting from home, and faculty physicians who were able to eliminate charting from home reported increased satisfaction with EHR. This intervention showed success with a small percentage of academic medical faculty, and it targeted clerical and administrative duties, which have been reported as a burnout driver (see Table 3).

Another job factor intervention reported that changes in workflow and communication systems reduced burnout and increased job satisfaction (Linzer et al., 2015). The authors targeted a variety of academic and non-academic primary care physicians and tested seven strategies to improve workflow, communication, or quality improvement. Intervention sites showed a 22% improvement in burnout rates and a 23% improvement in job satisfaction. Workflow changes – off-loading clerical tasks to non-

physician providers, improving patient flow, scheduling longer appointment slots – most strongly affected burnout. Improving communication through regular team meetings about care issues most strongly affected job satisfaction. These interventions were provided to care centers as standard improvements and did not take individual site needs into account. With more site resources and planning, faculty and other providers were given responsibility for planning their own interventions.

Literature has shown the most effective interventions work toward changing job factors within and outside organizational culture. Organizational culture is defined and impacted by many facets of the work environment: expression of institutional values, support from leadership, expectations of faculty, and collegiality. Since organizational factors play a strong role in determining burnout, organizational culture should be one of the first areas of focus for change. Many times, organizations treat the symptoms of burnout but fail to make changes to address organizational causes (Slavin, Schindler, Chibnall, Fendell, & Shoss, 2012) even though these factors are the most highly rated recommendations in faculty surveys and research agendas.

Cultural change programs were often designed with long-term repercussions in mind. Models entered the literature based on theory and strategies from other fields. One such model – PERMA – outlined ways to address workplace stressors proactively rather than treating symptoms after burnout arose (Slavin et al., 2012). PERMA encouraged institutions to aim for positive emotions, engagement, relationships, meaning, and achievement. Another early model was CREW (Civility, Respect & Engagement at Work) in which an institution created multidisciplinary teams to identify and address incivility in the workplace (Day & Leiter, 2014). For the purpose of this program,

incivility was defined as low-intensity, discourteous, or rude behaviors such as terse emails; workplace incivility was frequent and often led to reciprocation of similar behavior.

Some programs strove to engage physicians in long-term or leadership development programs to increase organizational commitment and engagement. One of these programs, the Listen-Act-Develop (LAD) Model for Physician Engagement empowered physicians to lead multidisciplinary teams in developing solutions to organizational issues (Swensen et al., 2016). Faculty-run initiatives in the program resulted in higher morale and teamwork, an 11% reduction in burnout scores, and an office for leadership and organizational development.

These programs often required time and financial incentives above and beyond normal work assignments, a resource not all universities were able to leverage for their faculty. Per the literature, interventions appeared to be successful regardless of the form they took. Keep in mind, although the drivers of burnout are universal, the way in which they manifest themselves in an individual organization, department, or division is unique (Swensen et al., 2016). The most successful and utilized interventions arose from addressing the individual needs of specific groups of faculty; the LAD model put faculty in charge of their own interventions. Organizational demands, resources, and culture are unique and should be addressed on a case-by-case basis to design the most effective interventions with the available resources.

Regardless of intervention strategy, the issue of physician burnout has gotten the attention of health care executives nationally. In 2008, the Triple Aim strategy was introduced and quickly spread to virtually all health care centers in the country (Berwick,

Nolan, & Whittington, 2008). These goals are to (a) improve the health of populations, (b) enhance the patient experience, and (c) reduce the cost of care. More recently, a push has been made to include a 4th aim: improve the work life of clinicians and staff through steps like having non-physicians complete documentation in the room while physicians are seeing a patient, review lab results before or after appointment windows, complete counseling with other providers for preventive/chronic issues, standardize prescription refill workflow, create team workspaces, and train staff more completely (Bodenheimer & Sinsky, 2014). These broad strategies off-load care activities from physicians to other trained providers and help improve workflow, strategies that have been proven to be successful.

Personal characteristics are often beyond the scope of change for organizations. Research has failed to find consistent burnout drivers within the scope of personal factors. Yet there is agreement that this factor does play a role in burnout, and individual level interventions have been shown to be effective at this level. Giving faculty the resources to build support systems certainly helps buffer the onset and severity of burnout, but these interventions are but a bandage to protect against the effects of job factors on burnout. Without the guidance of a framework to better explain this list of burnout drivers, progress toward mitigating them cannot be made.

Job Demands-Resources Model

The Job Demands-Resources Model (JD-R) postulates that all job characteristics are either demands or resources for workers (Bakker & Demerouti, 2007). An excess of job demands is predictive of exhaustion, while a lack of resources more accurately predicts disengagement (Demerouti et al., 2001). Exhaustion and disengagement

(depersonalization) are, not coincidentally, the two most studied dimensions of burnout (Maslach & Leiter, 2008). Leading scholars in JD-R research commonly link this model to burnout, but the model has not been adopted in U.S. research on a large scale.

Most research on the JD-R has been conducted in the Netherlands. A multi-industry study showed significant demand factor loadings for job characteristics like workload, time pressure, client contact, shift work and physical environment. The same factor analysis reported feedback, rewards, job control, participation, and supervisor support as resources (Demerouti et al., 2001). About half the time, higher education employees did not experience burnout from high demands when resources like autonomy, feedback, social support, and strong leadership were also reported (Bakker, Demerouti, & Euwema, 2005). These factors represent many of the interpersonal and job factors discussed earlier in this chapter, and many are covered in the interview questions in this study (see Appendix A).

In a qualitative interview study of medical school faculty in two teaching hospitals, six themes were reported that contributed to both demands (D) and resources (R; van den Berg et al., 2015):

- Colleagues: cooperative (R) or not cooperative (D)
- Support: time and support for faculty development (R) or no compensation for teaching activities (D)
- Curriculum: academic freedom to create content (R) or not being able to teach on niche interests (D)
- Systems: career opportunities (R) or poorly implemented recognition programs (D)

- Culture: active educational mission (R) or unappreciative top-down approach (D)
- Teaching: learning goals, small sessions, feedback, curious learners (R) or use of ready-made materials, large lectures, giving negative feedback, disruptive learners (D)

These categories line up with those discussed previously in this chapter as well as the simplified factor categories proposed in this project. Personal factors exist only in the project because literature in the medical field lists personality and demographic findings relevant to burnout.

Table 4
Comparison of Work Areas with JD-R Demands

<u>Proposed Study Categories</u>	<u>Maslach & Leiter (2008)</u>	<u>Demerouti (2001)</u>	<u>van den Berg (2015)</u>
Personal	n/a	n/a	n/a
Interpersonal	Community	Recipient/client contact, Feedback	Colleagues, Teaching
Job	Workload	Workload, Time pressure	n/a
Job	Fairness	Supervisor support	Culture
Job	Control	Shift work, Job control	Curriculum
Job	Reward	Rewards	Systems
Job	Values	Supervisor support	Support, Culture

Much of the research on burnout and the JD-R generated lists of factors that positively and negatively affect employee stress and well-being. However, JD-R scholars recommended a two-stage approach to research – qualitative interviews followed by a customized survey to all employees in the study group (Bakker & Demerouti, 2007). Though factors seemed consistent throughout research, responses to job characteristics were not always universal and were very personal and dependent on organizational culture (van den Berg et al., 2015).

By understanding the nuances of demands and resources within a single department in a large research university, this study intends to create a more holistic picture of burnout. Though some job characteristics like cooperative coworkers, an active teaching mission, and support for faculty development were interpreted as “resource” factors, these characteristics are experienced and defined differently by individual faculty members, divisions, and departments (Swensen et al., 2016). Therefore, determining the unique mix of factors and their interplay and relationship to burnout is the most reliable first step toward targeted interventions.

Summary

Burnout, and ways to fix burnout, have proliferated in medicine and medical education over the last decade or two. The Maslach Burnout Inventory has become the scale of choice for burnout, but researchers have altered the scale to fit the needs of their studies and study populations. Though these alterations increased response numbers and allowed researchers to collect a broader set of data for correlation and factor analysis, they altered the original purpose of the scale and may skew results.

Burnout rates in physicians continue to rise, despite an increased focus on interventions. Specifically in academic physicians, contact with learners serves as a buffer against job stressors. However, burned out physicians are more likely to leave their jobs. The most salient predictors of burnout have been job factors, but most interventions target personal characteristics. Recommended interventions target job and interpersonal characteristics rather than solely focusing on personal factors.

The six recognized job areas that contribute to burnout line up with quantitative and qualitative research on job demands and resources (see Table 4). As a conceptual

framework, the JD-R model allows for the breadth of experience levels, specialties, and work assignments within an academic medical faculty and supports documented job factors that lead to burnout or contribute to wellness.

The literature provides a litany of job factors that contribute to burnout. Using the JD-R as a guide, all job characteristics can be viewed as either demands or resources based on each faculty member's experiences. These demands and resources are not universally defined but rather are interpreted differently by each person or in each organization (Swensen et al., 2016). Thus, each study population should be expected to report a different combination of demands and resources based on their own personal factors, interpersonal experiences, and work environments. Basing intervention strategies on a generic list of factors will never be the most effective or efficient strategy.

Qualitative research allows the specific nuances and interplay of these factors to be explored within a specific study population. By determining (a) which factors are interpreted as demands and/or resources or (b) the role of personal, interpersonal, and job factors; and (c) how these factors are connected, a holistic model of burnout can be created. This model can then be used to effectively plan interventions to address demands in a relevant way.

CHAPTER 3: METHODS

Introduction

In the last 10-15 years, burnout research has focused strongly on quantitative measures and shortening those measures into the fewest number of questions possible to determine a participant's state of mind. Though a shorter measurement tool often increases completion rates and participation, especially in fields like medicine where time is a valued resource, these tools tend to skew the original definition of burnout into that of stress or exhaustion (Eckleberry-Hunt et al., 2017). To gain a holistic view of burnout, it is worth returning to the original research methods through qualitative research.

When the field was evolving, most research around burnout was qualitative in nature and employed interviews, observation, and case studies (Maslach et al., 2001). Research took a bottom-up approach, and researchers spoke directly with workers rather than leadership (Schaufeli et al., 2009). Though the drivers of burnout overlapped between studies, the ways in which those drivers manifested themselves in each individual organization or field was unique (Swensen et al., 2016). This unique burnout profile thus lends itself to a unique set of interventions targeted at a specific population rather than the generic wellness programs or mindfulness workshops so many institutions implement (Schrijver, 2016).

The purpose of this study is to understand the interplay of demands and resources that affect burnout and wellness in academic medical faculty at a large research university. This chapter will discuss research questions and tools used in this specific study. Additional details on philosophical assumptions, interpretive frameworks, and the Job Demands-Resources model will be provided. Creation of the interview schedule and selection of participants will be explained in addition to data collection methods. Finally, the chapter will touch on validity and reliability concerns in this type of study.

Research Questions

Existing literature points to three main areas that affect burnout in workers: personal factors, interpersonal factors, and job factors (see Table 3 in Chapter 2). Personal factors include demographics, age, and personality. Interpersonal factors include concepts like connectedness and belonging as well as interactions with colleagues and patients. By far the most studied category of factors is job factors, which includes variables like workload, expectations, administrative burden, control over scheduling, and values alignment.

Including the basic tenet of the Job Demands-Resources Model – that job characteristics are either demands that add to stress or resources that reduce stress – one aim of this study was to parse out which factors were salient to burnout and/or wellness and to determine whether factors could be universally labeled and “demands” or “resources” or if factors were defined on a more individual level. Of note, this terminology was not put directly into the research protocol to avoid leading participants in their responses.

Research Questions

1. How do academic medical faculty define burnout and apply that definition to themselves?
2. How do academic medical faculty interpret characteristics of their jobs as demands or resources?
3. How does the interplay of these personal, interpersonal, and job factors impact burnout in academic medical faculty?

Job Demands-Resources Model

The Job Demands-Resources Model (JD-R) is best applied to fields where job stressors are high and resources to meet those demands might be limited (Demerouti et al., 2001). Demands and resources can be physical, psychological, social or organizational and work in balance. Too many demands without adequate resources results in exhaustion or withdrawal and disengagement (Demerouti et al., 2001). When demands are high, resources can have a buffering effect for employees (Bakker & Demerouti, 2007).

Within the field of academic medicine, demands on faculty are almost always aggressively high. Faculty are expected to see patients, often as the majority of their work assignments, as the primary financial interest of their departments. Additionally, they have teaching roles that range from working with learners during clinical time to teaching courses within the medical school to traveling internationally with learners. Most educational materials are prepared outside normal working hours. Faculty might have additional research and administrative roles on top of clinical and teaching responsibilities (K. Miller, email communication, May 2017).

Methodology

Exploring the lived experiences of academic medical faculty in regard to burnout and wellness lends itself to a specific set of assumptions and perspectives. This section will consider the ontological assumption of reality as the experience created by an individual. As far as interpretive frameworks, social constructivism will be compared and contrasted with other possible interpretations. Finally, phenomenology and its branch interpretive phenomenology will be discussed.

An ontological assumption requires that reality is constructed from the conglomerations of viewpoints from different individuals. The assumption relies heavily on the perspectives of individuals as multiple perspectives on reality (Creswell, 2013). Each participant has a slightly different perception of the factors that contribute to his or her own burnout, though it can be expected that similarities exist among the group.

In looking for interpretive frameworks to best explain the experience of burnout in academic medical faculty, both symbolic interactionism and social constructivism appeared to be valid choices. Symbolic interactionism is concerned with the importance of symbols and how those symbols are interpreted through social interaction (Patton, 2002). This approach postulates that interpretation and social interaction play a critical role in the meaning individuals give to objects or events (Smith, 1996). Researchers look for a common set of symbols that give meaning to certain interactions (Patton, 2002). Though research has shown that interpersonal factors play a strong role in burnout, these factors are not explicitly used as meaningful symbols by physicians.

Likewise, social constructivism assumes that individuals develop subjective meanings based on interactions with others; however, the focus is more on the process of

interaction as a driver of meaning rather than on the symbols themselves. Viewpoints of individual participants are key in constructing theory inductively (Creswell, 2013). This framework fits well with an ontological assumption in that both rely on participants' own views of reality as the most important data points in constructing meaning. In fact, social constructivism encompasses the theory on ontological relativity: reasonable statements about reality are grounded in a worldview, and no worldview is created on empirical facts alone (Patton, 2002). Because this study relies on the individual points of view of participants to construct an overarching picture of burnout within academic medical faculty, and the researchers recognize the interactive nature of burnout, ontology and social constructivism are appropriate starting points for this study.

By examining the meaning of personal, interpersonal, and job factors qualitatively, the unique meaning given to these factors can be determined. Rather than presenting another checklist of burnout drivers, the specifics of factors and their interplay can be determined. This situation-specific explanation of the drivers of burnout falls in line with existing literature (Swensen et al., 2016) and creates a more precise starting point for interventions.

Phenomenology. In existing burnout literature, a mismatch exists between the long, but inconsistent, list of predictors and drivers of burnout and interventions institutions have implemented. Though faculty ask for support, recognition, and protected time, these concerns are not being addressed (Pololi et al., 2009a; Schrijver et al., 2016). Also, validated measurement tools have been misused, and scoring has not been accurate, further muddying the picture of burnout in medicine (Eckleberry-Hunt et al., 2017; Eckleberry-Hunt et al., 2018). Scholars in the field of JD-R have recommended a two-

stage approach that starts with using qualitative research to get a more accurate profile of burnout, culture, and morale in a specific setting before launching a larger survey tool (van den Berg et al., 2015). Using an approach like phenomenology allows for broad enough research and interview questions to allow participants to sculpt their own model of burnout and wellness, while interpretive phenomenology takes into account a researcher with knowledge and experience in the field.

Phenomenology, as a research method, seeks to explain the lived experiences of individuals. Each perspective is valued for its unique qualities, but researchers look for common themes among individual cases (Pietkiewicz & Smith, 2014; Smith & Osborn, 2003). Most commonly, phenomenological studies spend a prolonged amount of time studying a small number of individuals who have had a shared experience or event (Glesne, 2016). Even in its early days as a theory, the focus was on individual interpretation of the world and an individual's description rather than empirical fact (Husserl, 1913) as it is today (Patton, 2002).

The theory of phenomenology includes four distinct philosophical perspectives:

- Philosophy – the search for wisdom through non-empirical data collection
- Philosophy without presuppositions – no judgments are made about the phenomenon until they are supported by data
- Intentionality of consciousness – reality is comprised of both objects and individuals' interpretations of those objects
- Refusal of a subject/object dichotomy – reality is seen only through the lens of interpretation (Creswell, 2013).

To allow the least-influenced sense of an individual's reality to come through, researchers ask as few questions as possible, perhaps only, "What did you experience?" and "What context or situation affected your experience?" (Creswell, 2013). The goal is to uncover the essence of the experience, the core components understood through shared experiences (Patton, 2002).

Interpretive phenomenological analysis (IPA) falls within the phenomenology umbrella. Notably, it does not include bracketing the researcher out of the research findings. Rather, the approach includes a two-stage hermeneutic: participants making sense of a situation and the researcher interpreting participants' interpretations of a situation (Smith & Osborn, 2003). In this way, the researcher's understanding becomes part of the findings rather than being bracketed separately (Matua & Van Der Wal, 2015). In this particular study, my perspective as a member of the graduate medical education community for the last ten years provides insight into the culture, work environment and historical context of relationships within the specific department being studied.

Because IPA takes the researcher's interpretation into account as part of the research findings, the results include an explanation of the phenomenon as seen in typical phenomenological analysis but also have another layer of interpretation of meanings and structures that would otherwise be missing (Matua & Van Der Wal, 2015). The resulting narrative features common themes and shared experiences in addition to highlighting unique, individual experiences (Smith, 2004). Basically, IPA aims "to explore in detail how participants are making sense of their personal and social world, and the main currency for an IPA study is the meanings particular experiences, events, and states hold for participants" (Smith & Osborn, 2003, p. 53).

Interpretive phenomenology has three key features:

- Idiographic – fully examines one case before moving to the next and examines cross-case themes only after all individual cases have been studied
- Inductive – does not compare data to previous studies, uses broadly-worded research questions to allow for flexibility during data collection
- Interrogative – discusses findings in the context of existing literature, research and theory (Smith, 2004)

Because of these qualities, IPA can enrich the body of literature in a field that is typically studied quantitatively (Smith, 1996), like burnout. IPA also supports the use of the Job Demands-Resources framework. By investigating a single case and its meaning, rich definitions and relationships of personal, interpersonal, and job factors are created before attempting to compare those factors between faculty, as even faculty in a single department are likely to interpret factors differently. Interview questions are phrased broadly enough to allow faculty to construct and define their own meaning; questions and probes were written to address factor areas (personal, interpersonal, job factors) but not to push toward specific characteristics.

In addition to maintaining the idiographic quality of IPA, this study will follow the tenet of interrogation – situating the interplay of burnout factors within the current body of literature and theory. European scholars have used the Job Demands-Resources model to describe job characteristics that lead to or buffer against burnout (van den Berg et al., 2015). However, most of the research done in the U.S. adds to a growing list of predictors (see Table 3 in Chapter 2) and research agenda items include establishing links between burnout, well-being, and health outcomes and finding prevention strategies as

well as items like using common metrics and developing a comprehensive framework for intervention (Dyrbye et al., 2017).

The expectation is that the results from this study will include universal components that are transferrable between medical education organizations but will also describe specific nuances of burnout factors and predictors within this specific institution. So, although results may answer some of the questions laid out by scholars in the field, it also serves to change the conversation to examining the unique combination of organization-specific characteristics that drive burnout and those that should be targeted for further intervention.

Data Collection

Pilot Data. Pilot interviews were conducted as part of doctoral coursework projects. Two faculty members were interviewed about job stressors, colleagues, leadership, engagement, success, and burnout. Though these interviews covered many of the areas discussed in the literature, additional detail about each area was needed to make meaningful connections and inferences about how these factors worked together. As a result, a more detailed interview schedule was created using current literature (see Appendix A). Also, to ensure saturation, a larger sample size (20-25) was recommended for subsequent data collection.

Additionally, coding pilot data led the researcher to the Job Demands-Resources (JD-R) model as a conceptual framework for subsequent work. Faculty members discussed each interview topic positively or negatively (although some areas needed clarification). Current work regarding burnout and the JD-R found similar results (see Table 4 in Chapter 2). The attached interview schedule was used to collect secondary

data from 22 faculty members. IRB approval was obtained before collection of secondary data.

Interview Schedule. As is recommended for phenomenological research, semi-structured interviews were used to collect data (Smith & Osborn, 2003). Existing literature was used to create an interview schedule addressing these topics: job roles/demands/resources, demands/resources outside of work, participant definition of burnout, changes in work assignment/roles as study progressed, attitude toward job, and institutional characteristics (see Appendix A). Of note, the semi-structured nature of interviews allowed for questions to be asked out of order, probing questions to be added as areas of interest arose, and gave the freedom to follow the participant's concerns when necessary (Smith & Osborn, 2003). Questions were written to include sensory perceptions, thoughts and memories, and individual interpretation of events and situations (Pietkiewicz & Smith, 2014).

Initial question stems may appear to be binary; these questions were meant to start a conversation or direct a participant to commit one way or the other before elaborating. These questions had additional prompts to further the conversation. For example, when asking about support from leadership, participants were asked to commit to (not) feeling supported before qualifying the statement.

Interviews 1 and 2 were scheduled at each participant's convenience and choice of location. Interviews lasted 30-60 minutes. Because physicians could have been interrupted by patient care or other urgent issues, questions about job stressors and attitude toward burnout were prioritized for the first interview; questions about mitigation strategies were deferred until Interview 2 when necessary. Interview 2 took slightly less

time, although participants were asked to block 60 minutes on their calendars. Interviews were scheduled approximately six months apart as schedules allowed. Interviews were spaced at this interval to prevent recent stressors from confounding data. Questions about job stressors and recent changes were repeated at each interview to gauge consistency of long-term stressors versus short-term stressors.

Participants. This study took place within a single department at a large research university. The department employs about 200 full-time academic medical faculty. These faculty roles include clinical time and may include teaching, administrative, and/or research assignments as well. The department is comprised of twenty-one clinical divisions and three research divisions. Faculty see patients within the local children's hospital and consult with other hospitals in the metropolitan area and in outlying areas. Patients are also seen in outpatient clinics and travel clinics throughout the state. Some faculty participate in international health programs and spend several weeks each year teaching and doing clinical medicine in locations like Quito, Ecuador; Tamale, Ghana; and Chiapas, Mexico. Faculty ranks range from Instructor to Professor.

Literature on phenomenology recommends a wide variety of sample sizes from 5 to 25 (Creswell, 2013; Polkinghorne, 1989), and scholars recommend basing the sample size on the depth of analysis and richness of cases, while taking pragmatic boundaries of the research project into account (Pietkiewicz & Smith, 2014). For this study, a target sample size of 20-25 was used. In a large department with multiple divisions and clinical settings as well as a wide variety of teaching roles, it was unlikely that saturation would have been reached with a smaller sample size. A similar study used a sample of 16 academic faculty (van den Berg et al., 2015). Inclusion criteria were work assignments

that included both clinical and teaching roles. Faculty in program director or other residency leadership roles were excluded due to proximity of their positions to the interviewer.

Data Collection and Analysis. A recruitment email was sent to all faculty who met inclusion criteria within the department. A second email was sent to recruit additional participants. Interviews were scheduled at the participant's convenience and took place at the health sciences campus and alternate locations. Interviews were recorded, and field notes were taken to note nonverbal data based on participant's comfort. Interviews were transcribed to include pauses, false starts, laughter, and other speech patterns as these patterns may have been valuable in interpretation and analysis of context (Smith & Osborn, 2003).

Because this study is guided by the Job Demands-Resources model, initial coding was deductive in nature using the three factor areas (personal, interpersonal, job factors) and demands/resources as initial code categories. Subcategories were added as they appeared in transcripts. Both interview transcripts for each participant were coded before moving on to the next participant's transcripts so consistency in overlapping questions could be ensured or accounted for. As a second step, open coding was performed. Codes were created inductively as each case was analyzed and carried on to the next case as a preliminary list of codes; new codes were allowed. As patterns emerged or codes diverged, the codebook was updated.

For cross-case analysis, data display matrices noting key variables – personal, interpersonal, job factors – and case dynamics helped develop a holistic picture of burnout and show how faculty managed their thoughts, feelings, and reactions (Miles &

Huberman, 1994). Because extensive background research had been done on this topic, one anticipated challenge was analysis without subconsciously trying to fit data into existing explanations. Peer review and leaving an audit trail for review by my dissertation committee held me accountable for verifiable conclusions.

Validity and Reliability

Researcher Positionality. As a non-physician administrator in a medical education program, my positionality could be summed up as a well-assimilated outsider. I am a white female in my mid-30s in a white female-dominated medical specialty. Terminal degrees are generally respected within the field, though medical faculty tend to note when someone is “PhD faculty” or has another terminal, non-MD degree. Current accreditation guidelines limit certain positions (i.e. residency program director) to MD faculty only, further separating MDs and non-MDs.

As a doctoral student, the department has been more than willing to enlist my help and knowledge in non-medical fields – qualitative research, adult education, and an affinity for order and spreadsheets. Faculty who are involved in those fields tend to respect my opinion as an equal. Those who are not closely involved with the residency program or other programs with which I am closely tied still tend to view my position as office support staff for the residency.

Because of my experience with the residency program, I started researching burnout and wellness in residents as a way to tie together school work and office work. My job was to make a difference with the residency curriculum, so that was my focus. However, as I got feedback from colleagues in our region and nationally, there was concern that faculty burnout and wellness was understudied yet played a big role in

resident and student wellness. Yet I am a site principal investigator for a national resident burnout consortium and had invested most of my energy there. Though initially resistant to focusing on the faculty, as I moved along in PhD coursework and started working with faculty more, I realized there was an expectation that they manage their own work assignments and specific projects with varying levels of oversight and guidance.

My role as an “assimilated outsider” may affect data collection by limiting the information faculty members are willing to provide to a non-physician, a student, or someone who is younger than most of them. However, the length of my tenure with the department could also serve as an advantage for trustworthiness. Data analysis is also likely to be skewed by this experience and should be reviewed by individuals outside the field of medicine to eliminate this bias.

As a researcher within this field, the most difficult problem I have faced is the line between researcher and advocate, especially in projects like this where faculty disclose difficult stories and situations and talk about mistreatment and difficult working conditions. Though this line is difficult during and immediately after data collection, it also should be respected during analysis and write-up. The purpose of this project is to describe personal, interpersonal, and job factors as they work together in burnout, not necessarily to create change or design specific interventions.

Trustworthiness. Qualitative research often eschews the typical quantitative terms “validity” and “reliability” in favor of “trustworthiness” and “transferability.” Debate over the best way to determine trustworthiness exists, but the basic tenet is as a way to determine the quality of a qualitative research study. For example, Angen (2000, p. 387) defends validation as “a judgment of the trustworthiness or goodness of a piece of

research.” Scholars lay out a plethora of criteria for determining validity and trustworthiness. Interpretive phenomenology, as a research method, lends itself to some of these quality checks simply by following protocol.

My knowledge of the field and setting are reported as findings and enrich the data already (Matua & Van Der Wal, 2015). IPA narratives also include common themes in addition to individual experiences and cases; though these cases may not always lie in direct opposition to the norm, reporting individual experiences enriches the data and shows validity and realism (Smith, 2004; Smith & Osborn, 2003). Clarifying research bias by highlighting my own positionality instead of bracketing it away uncovers possible biases and cements the position of the researcher within institutional culture (Matua & Van Der Wal, 2015).

The nature of the data collected also lends itself to member checking for clarity. In both the existing literature (Swensen et al., 2016; van den Berg et al., 2015), and in pilot work for this project, traits were not always clearly denoted as demands or resources. In at least one instance, a participant was contacted to make sure my interpretation of her response was correctly labeled. Though this practice is outside the definition of member checking given by Creswell (2013) – sharing analysis, not transcripts – it proved to be useful in properly analyzing data. Additionally, working closely with my dissertation committee will provide more than enough opportunity for peer review and debriefing on my data and findings.

Summary

The topic of workplace burnout has seen a tremendous rise in popularity in medicine, where researchers have distorted both the definition and standardized

measurement tools. By using qualitative research, and IPA specifically, this study seeks to paint a more accurate picture of burnout within a single, large academic medicine department at a research university. Academic medical faculty deal with increased demands as their time is divided between patient care and trainee education, with or without additional research and administrative duties. The variety of practice specialties and practice settings requires a sample size that is, arguably, larger than average, though comparable to similar published work (van den Berg et al., 2015).

The purpose of this study is to understand the interplay of demands and resources that affect burnout and wellness in academic medical faculty at a large research university. Specifically, the research addresses specific personal, interpersonal, and job traits that affect burnout and wellness, seeks to understand how faculty mitigate these factors, and asks how the department and university can better support its faculty members. This study has been approved by the Institutional Review Board at the University of Louisville.

CHAPTER 4: FACULTY INTERPRETATIONS OF BURNOUT, DEMANDS, AND RESOURCES

Burnout literature estimates about 30-45% of physicians are burned out, but literature does not give a clear definition of attributable factors or qualify when and how they drive or mitigate burnout. By studying these factors qualitatively, this study aimed to create a more holistic picture of burnout in this population. The purpose of this study is to understand the interplay of demands and resources that affect burnout and wellness in academic medical faculty at a large research university.

Academic medical faculty were asked about a wide variety of personal, interpersonal, and job factors and how they interpreted those factors to be demands or resources. Demands are characteristics that add to stress or prevent faculty from completing their work. Resources are characteristics that mitigate stress or help faculty do their work more efficiently or effectively. According to the Job Demands-Resources Model, the balance of demands and resources can determine burnout.

Academic medical faculty in this study defined burnout more casually and synonymously with stress than with the standard definition. In describing personal, interpersonal, and job characteristics, they did not define many universal demands; rather, they interpreted characteristics contextually and provided grace for circumstances beyond the department's control. Overarching themes of burnout drivers emerged, but specific

sub-themes were likely unique to this population because of the contextual nature of individual interpretations.

Results from this study are broken up into two distinct chapters: Chapter 4 will answer research questions #1 and #2, and Chapter 5 will report findings related to the interplay of factors in determining burnout.

Research Questions

1. How do academic medical faculty define burnout and apply that definition to themselves?
2. How do academic medical faculty interpret characteristics of their jobs as demands or resources?
3. *How does the interplay of personal, interpersonal, and job factors impact burnout in academic medical faculty? (see Chapter 5)*

RQ1: How do academic medical faculty define burnout and apply that definition to themselves?

Disparate definitions of burnout symptoms were cited by faculty and tended to run on a spectrum from disinterest in work to overwhelming anxiety. They tended to define burnout as existing on a scale or continuum. Faculty were also asked to place themselves within their own definitions of burnout. In discussing burnout, feelings were often short-term or transient and based on service commitments rather than reported as long-term symptoms. For example, Maureen, who does a large amount of inpatient service time, reported feeling burned out at the end of a week on service.

Emotional Characteristics of Burnout. The most commonly cited symptoms of burnout were disinterest or unhappiness in one's work and chronic exhaustion or pain.

Most often, faculty talked about not being interested in work that used to be interesting or finding it difficult to come to work. Jane, an early-career outpatient physician illustrated this finding: “Burnout for me is just not seeing the reason for coming into work and doing what you used to love.”

Other emotional characteristics of burnout according to faculty included not caring, anxiety, frustration, lack of satisfaction in your work, and feeling overwhelmed. Nicholas, who has a high-level administrative role, explained, “you’re just like – I’m done with it, I’m going through the motions, I don’t care if this gets fixed or not, I’m not going to exert any of myself to fix this problem for somebody else.”

Interestingly, categories of emotional response did not overlap in faculty definitions of burnout. Faculty reported one emotional reaction but not multiple, with the exception of one occurrence where Camille, an early-career inpatient physician who has taken on several new responsibilities over the last few years, talked about anxiety that resulted from being overwhelmed. In this study, faculty defined burnout using a combination of emotional and physical characteristics.

Physical Characteristics of Burnout. Physical characteristics of burnout reported by academic medical faculty in this study encompassed those felt by faculty as well as measures that were noticeable to others. Chronic exhaustion and, less frequently chronic pain, were also mentioned as markers of burnout in faculty members’ definitions; notably, most faculty talked about periodic exhaustion whether or not they actually defined themselves as burned out. Denise, a seasoned intensive care physician, explained, “to me, when I think of burnout, I think you are physically and emotionally exhausted and mentally exhausted.”

Most often, faculty felt communication suffered in burned out individuals. Chris, also an intensivist and late-career, added, “part of that is you stop caring about the impact of your words on your colleagues and coworkers, so you become a little bit less careful about how you communicate, usually frustrations, to the people that you’re working with.”

Additional characteristics included inadequacy and being non-functional. These outcomes sound similar but were defined differently. Participants referred to inadequacy as trying and failing to meet external expectations: “Feels like you’re underperforming, I think that’s part of it. It feels like you’re letting people down because you’re not able to stay on top of everything and meet everyone’s demands” (Denise). Not functioning was more a matter of not being able to complete any tasks and is more self-centered than inadequacy. Dorothy, who works with high-acuity illness, explained, “I would say burnout is when you are so overwhelmed by your job that you start to lose your ability to perform it to your optimal effectiveness.”

Faculty typically used a scale or continuum to describe burnout rather than a burned out/not burned out dichotomy. They placed themselves on this spectrum in a variety of ways. Some used numeric scales: 2-4/10 (Dorothy), 8/10 (Denise). Others described themselves as being “in the middle of the spectrum” (Maureen) or “I’m definitely on the healthier end” (McKenna). This spectrum was also applied to the appearance of some of the characteristics discussed above. John, a late-career inpatient physician, explained:

Different behaviors as well that can range from substance abuse issues... You can see it in ranging from poor relationships within family units to abuse relationships

within family units. You can see it range into depression; you can see it range into poor professional interactions.

Causes of Burnout. In short, faculty defined job factors, interpersonal factors, and personal factors as the main causes of burnout, the major factors used in designing this study. Faculty did not often cite determinant factors of burnout as part of their definitions, but the causes that were cited included workload, environment (labeled ‘climate’ further in this chapter), and their own expectations or perfectionism. Bill, a late-career physician with roles at multiple centers, summarized the workload component succinctly, “that’s the burnout, the burnout is overload.” Cheryl, a mid-career intensive care physician, spoke about the interpersonal component: “when people don’t feel like they have someone who can help them along the road, I think it makes it really hard, and that’s why I think people burn out.” Perfectionism was a trait felt by several faculty, including Abby, a mid-career physician, “I think you get burned out when you ask too much from yourself, and it’s not realistic. I think we’re all perfectionists, and not being able to reach that makes us lose our minds.”

Defining Their Own Burnout. Some faculty very confidently defined burnout in a way that was far from the established definition. One faculty member talked about work burnout versus home burnout. Several other faculty members talked about short-term burnout that appeared at the end of a week on service and went away within a few days. Because burnout has been overused in the medical literature and within individual programs, it often becomes synonymous with stress or frustration.

Faculty were then asked where they fit compared to their own definitions of burnout. Their own definitions included stress responses like frustration, anxiety, and

being overworked. Though many faculty included these terms in their descriptions of their own feelings, not many faculty claimed to be burned out on any level (see Table 5).

Table 5
Faculty Interpretation of Their Own Burnout

<u>Participant</u>	<u>Interview 1</u>	<u>Interview 2</u>
Abby	Balanced, not burned out	Feels better after job change
Bill	Tired but wants to work	More stressed, looking toward retirement
Camille	Recovered, feels good, settling in	Feels good, some personal stressors
Cathy	Recovered but still pessimistic	Flippant about position and barriers to progress
Cheryl	Bored, not burned out	Bored, unable to find niche
Chris	Burned out at times	A little burned out most days
Dawn	Opposite of burned out, sometimes frustrated	Feels ok (describes self using language verbatim to own definition)
Denise	Closest she's ever been 8/10	A little better, in control of email
Dorothy	Feeling a little burned out, 3/10	Happy, division plagued by uncertainty
Frances	Not burned out, aware of risk	Not burned out reputation
Frederick	Questioning sustainability of pace	Talks about backup plan if things don't improve
Jane	Recovered, feels good	Office drama increased stress
Jill	Moving toward burnout	Feels better after vacation
John	Burned out	Feels better after job change
Lindsay	Moments where lazy, catches and corrects	Guilty about admin time, frustrated by lack of power
Matthew	Busy, not burned out, aware of risk	Frustrated but excited about solving problems
Maureen	Middle of spectrum depending on day	Anchored by calm, seasoned faculty
McKenna	On healthier end of spectrum	Has new role and backup plan if it doesn't work out
Nicholas	Not remotely close to burnout	Very burned out, leaving university
Roberta	Recovering from work, home burnout	Division drama, keeping head down
Tina	"In a good place"	Still feeling content (very depersonalized)
Violet	Overworked, not burned out	Feeling a little burned out

Many faculty had appropriate self-awareness of their own stress and burnout levels when their interview transcripts were compared to questions on the Maslach Burnout Inventory (MBI). Some faculty used other terms to describe their stress – overworked, tired, bored, busy – rather than labeling themselves as burned out. Often,

faculty put coping mechanisms in place to combat job stressors, specifically colleague and family support, as discussed later in the chapter. Some began hobbies like golf (Chris) or piano (Violet) in response to starting to feel burned out.

More detrimental for education, perhaps, are the faculty members who describe themselves as “feeling good” or “having found balance” but who talk about being constantly exhausted and frustrated with coworkers. Participants who fit this profile – most consistently Tina and Cheryl – were in charge of specific areas of curriculum and, though they spent time with learners regularly, they spoke negatively about their experiences and about learners in general. Tina and Cheryl also care for some of the sickest patients in the health care system.

In many cases, these faculty members stopped short of being callous with patients, but their roles within their divisions and their outlook on patient care was very negative. For example, one faculty member who claimed to feel healthy also talked about the long list of people who annoyed her, that no one understood what it was like to work in her division, that she had no idea what the department expected of her, that her colleagues were micromanagers and did not let learners learn anything, and that she was tired of writing “the same damn thing on the annual program evaluation every year” because of a lack of academic time to complete program goals (Tina).

Most faculty took note of their increasing stress levels and changes in behavior. Violet, a mid-career faculty member with a wide variety of roles, explained, “there are things that I didn’t used to do that I’m now doing just because I had reached points where I felt that I am so burned out that I’m turning into a different person than I actually am.” However, those who displayed qualities of burnout without recognizing it are at risk of

more severe burnout and its consequences. In fact, Tina noted hypertension on her most recent annual exam for the first time ever.

Faculty reported characteristics of burnout that were not often easily distinguishable from less serious stressors. Certainly, communication problems and chronic pain are documented effects of burnout, but characteristics like frustration, anxiety, and being overwhelmed are likely temporary reactions to stress rather than characteristics of the syndrome itself. Faculty used many of the same terms regardless of how they interpreted their own burnout. Some faculty self-diagnosed the beginnings of burnout and started new hobbies or practices to mitigate work stressors, acknowledging their risk of burnout was high and noting the need for early interventions.

Additionally, the scale or spectrum used to define burnout and their own placement on that scale refuted commonly used terms of burned out/not burned out. It may also have given participants a gray area in which to categorize themselves. Faculty could down play their stress reactions and delay help-seeking behaviors because they did not define themselves as “burned out.” This denial could be especially true for academic medical faculty who internalized these stressors or accepted them as part of the job, a qualifier many faculty (Frances, Roberta, Tina, Dorothy, Violet, Chris, John) used when describing stressors.

RQ2: How do academic medical faculty interpret characteristics of their jobs as demands or resources?

This section addresses demands and resources as interpreted by academic medical faculty. Sub-sections are divided into themes as discussed in Chapter 3 – Personal Demands, Personal Resources, Interpersonal Demands, Interpersonal Resources, Job

Demands, and Job Resources. Representative quotes are provided as needed in each category. Because the data highlights the larger roles of job and interpersonal factors, these themes are discussed first, followed by personal factors. A summary of demands and resources can be found in Figure 2.

Personal Demands	Interpersonal Demands	Job Demands
Personality Reaction to Work	Colleague Conflict Family Stressors Challenging Learners Difficult Families	Workload Progress Inhibitors Leadership University/Hospital System Intangible Values
Personal Resources	Interpersonal Resources	Job Resources
Coping Mechanisms	Colleague Support Support Systems Learners Relationships with Patients & Families	Recognition Recovery Time/Meaningful Duties Productivity Leadership University/Hospital System Intangible Values Backup Plan

Figure 2. Demands and resources. This figure illustrates themes and sub-themes of characteristics faculty interpreted as demands or resources.

In their interviews, faculty were asked specifically about personal, interpersonal, and job factors in a manner that would elicit demands and resources without explicitly using that language (see Appendix A). For example, participants were asked about stressful parts of their jobs, culture of their division and department, and ways they relaxed after a stressful day, in addition to prompts regarding learners, patients, and academic responsibilities.

As expected, job factors represented the largest portion of discussion about demands and resources. Generally a dichotomy between demands and resources existed for most sub-themes in this area: workload/recovery time, progress inhibitors/productivity, leadership (demand/resource), university/hospital system (demand/resource), intangible values (demand/resource). This dichotomy indicates most demands and resources are not universal and that some sub-themes (i.e. leadership, integration with the hospital system) were interpreted as demands by some faculty and as resources by other faculty depending on their individual perspectives or how they benefit from initiatives.

Interpersonal demands and resources did play an important role and arguably represented the fulcrum between happy and unhappy faculty. Relationships with colleagues played a key role in defining the work environment and climate. As the data show, faculty who reported supportive or collaborative relationships with colleagues spoke more positively about their work, while those who reported less trusting or supportive relationships often had trouble finding an academic niche or looked outside their division/department to find value in their work.

Personal demands, though clearly defined, did not seem to play a big role in driving burnout. More important were the effects of work demands on personal life. Of note, most faculty described multiple coping mechanisms they put in place to combat work stressors; as expected, these activities varied considerably and did not include wellness offerings sponsored by the department or university.

Job Demands. Job demands were the largest category of codes within the Job Demands-Resources codebook. Codes fit into six categories: workload, progress inhibitors, leadership, university-level demands, system-level demands, and intangibles. As expected, workload was one of the main sub-themes in this section, but faculty did not always talk about the amount of work they had to do or the long hours involved. Rather, they talked about balancing patient care responsibilities with other academic tasks and with commitments outside of work. As a related set of demands, barriers to progress in these non-clinical tasks caused additional frustration. Leadership and university/hospital systems demands were voiced as background frustrations but not usually as daily stressors because they did not always affect day-to-day operations or patient care.

Workload. Most commonly, faculty discussed their work overflowing into time at home, either by choice or by demand. Other major topics included service time impacting academic interests, feeling overworked, and intensity of patient care. Lack of adequate support staff, changing practice guidelines, and the burden of technology making them constantly available also came up.

Service Balance (Home). Faculty often took work home with them or spoke about work impacting family time. At times, this work consisted of patient care notes that could not be finished during work hours, or faculty checked email and tasks from home after a

long day on service to minimize the backup of tasks when their week of service was over (Jane). Dorothy summarized working after kids had gone to bed:

I absolutely take work home with me because I can't get it all done when I'm here, and I want to go home and tuck my kids into bed and have dinner with them. If I don't get my notes done, I will go home, see my kids, put them to bed, and then stay up and do my notes.

Jill, a subspecialist, said something similar, "I try to catch up on the weekend, but then my kid has other activities, and I'm trying to be a good mom sometimes."

Service Balance (Work). Often due to being short faculty and staff members, faculty work extra time on service doing patient care. As a result, their time to pursue research, teaching, and other work interests is limited. Many chose academic medicine because of these responsibilities, so this unbalanced environment was viewed as a stressor. Fred, who sees patients within the university and contracts with outside providers, explained:

Wednesday morning is when [my calendar is] blocked for my research time. (laughs) I have my practice manager meeting every Wednesday at 9:00; I've got this call with the state at 11:00. The research is typically done at night, Saturdays, like most faculty members, that's just the drill.

Tina added:

If you say that 25% of my week is dedicated to sitting here at this desk, to my teaching activities, then that is not the case because the patient care has to come first. The service has to be covered because that is our, what we're led to do and what our mission statement is.

So, although their schedules and work assignments are designed with protected time for academic duties, the reality is that their actual work time is skewed heavily toward patient care and other duties due to practitioner shortages and the reality of working with multiple moving parts.

Overworked. Most faculty felt overworked because their divisions did not have enough faculty members to cover patient care, so faculty picked up additional service time. Because of that extra work, faculty felt they could not catch up on their non-clinical work and were spread too thin. Additional demands in this area included night shifts, weekend service, and long hours in general. Fred said of his current role, “questioning how sustainable it is to essentially have 3 full-time jobs is where I am, and I think, in large part, a lot of that really relates to long-term plan for our division and how it interfaces with other divisions.”

Regarding patient care duties, Tina gave an example of a colleague’s recent schedule:

[She] got to the hospital I think at 2:00 on Monday, in the afternoon. She worked all night, and she left about 3:30 [Tuesday] afternoon. And then she was here at 7:00am [Wednesday] for a meeting and now is taking care of patients all day.

And that’s not unusual for it to be like that.

Dawn, who is in the same division as Tina, added, “I think sometimes I feel overwhelmed because there’s a crap ton of things going on, and that’s just what I have to feel until I get over this hump.” These busy schedules often did not allow time to concentrate on teaching, research, or other meaningful duties.

Intensity of Patient Care. Intensity of care encompassed the acuity of very sick patients but also those that required multiple care teams and extra resources. Of note, this category was also viewed as a job resource by faculty, but only when they had the time and resources to adequately care for the patient. Jill, a subspecialist who sees patients with complicated diseases courses, described a typical case:

We get consulted with complicated cases. It's very unusual that somebody calls us with a simple question. When they call us, they have already been on antibiotics – several of them. The fever has been ongoing for days or weeks, and nobody has figured it out. They are not simple.

Not feeling prepared for negative outcomes was also discussed:

But it's that 1 out of 10 that doesn't do well or all of a sudden has an acute decompensation that you feel yucky about because you may not have prepared the family for that bad situation to have happened or that bad outcome to have happened. You may not have prepared your staff. You may not have felt prepared yourself, and you're being thrown into an unexpected crisis, and I think that's always a lot harder to deal with than the kids you know are doing poorly, and you expect something bad to happen, or children you potentially withdraw support on or things like that. (Dawn)

Support Staff. Participants in many divisions reported a lack adequate support staff to function efficiently. As a result, many faculty were performing clerical or other tasks that do not require an advanced degree. Fred said, "With present staffing, present budget culture, it makes it difficult to replace staff, so we are all really doing more with less, some of it outside the scope of our real work assignment." In many cases, faculty

reported maintaining their own calendars or performing other work “which does not require an MD” (Dorothy).

Cheryl explained the lack of adequate research support staff is preventing physicians from being as productive in their non-clinical tasks as they could be: “We should not have to be floundering to do these things. If you’re going to have a research coordinator for the division...there should be an active involvement...so that we, you don’t find yourself being the only one doing research.” She added that this lack of resources is producing less non-clinical productivity and is one of the reason trainees are choosing to leave the university after finishing training rather than looking for a position in the area.

Changing Practice Guidelines. Faculty discussed changing practice guidelines and regulations at the clinical level. Bill, who explained he’s one of the few of his generation still practicing, discussed changing trends regarding rounding and voiced his frustration, “I think it’s a pendulum, frankly, that the key word now is family-centered rounds, but come back in 10 years and it’s going to be something else.”

Some younger faculty discussed the difficulty in changing the way their groups function. McKenna, an early-career subspecialist, explained, “the historical dynamics are the hardest things to change; it’s like – well, that person’s been used to doing this stuff in the practice for 10 years; now to tell them to stop doing it.” Jane, an early-career outpatient physician, also spoke about her experience trying to implement new guidelines, “we cannot move forward if everyone’s complacent and just satisfied with the status quo. Ultimately, you have to change to grow. But when change is introduced in the division, there’s a lot of resistance.”

Technology. Technology burden was not a major topic of discussion, but faculty in divisions who work nights and other erratic shifts discussed the expectation that they are available constantly to answer emails and text messages:

I feel like before, when we didn't have emails constantly on your phone or the mobile devices, it was like I work; these are my office hours; I don't get to you within those hours. If you don't email me in those hours, you have to wait until the next day. When I go home, I go home. You're not going to hear from me again until my office hours. (Roberta, whose division works in-house 24/7)

Overall, workload demands came from feeling overworked and understaffed and subsequently struggling to balance academic and personal commitments with a clinical schedule that included more service time than their work assignments outlined. Burdens of patient care, changing practice and office guidelines, and the expectation of being constantly available added additional stress. As discussed later in this section, some faculty discussed unrealistic expectations from leadership or expectations without resources from the department and university; these perceived expectations could be a precipitating factor in driving the difficulty of balancing clinical and non-clinical duties.

Progress Inhibitors. Progress inhibitors are defined as job demands that prevent faculty from efficiently and/or effectively completing their jobs outside of workload demands. Progress inhibitors are characteristics that are not inherent to the job of an academic faculty member. They do not add to faculty members' workloads like patient care issues or lack of staffing would, but they may further exacerbate service balance stressors because they slow the progress of meaningful non-clinical work. Inhibitors include work they do not enjoy or that is not meaningful (administrative, clerical);

bureaucracy, having little power to change things, or stagnancy; and turnover or unproductive work spaces.

Administrative/Clerical Work and Electronic Health Records (EHR). Some faculty enjoy administrative work, but others do not. Clerical work was almost always discussed as a burden and was often related to a lack of support staff to perform these functions. For example, Dorothy said:

I schedule all my own meetings, I find all my own rooms, I put all my own stuff on my calendar. Um...like, my call schedule, ya know, I put all of that on my own calendar. I am the one who makes the moonlighting schedule...that's basically me just plugging numbers into a Sign Up Genius list, which doesn't require an MD.

But there's really nobody else to do it.

EHR was also a burden for some faculty members: "The documentation side in Allscripts takes an hour because it's in large part narrative – description of behavior, description of motor, description of these. There's not a lot of checkboxes – normal/abnormal; it's describing what's different" (Fred).

Bureaucracy/Little Power to Change Things, Stagnancy. Independently, dealing with bureaucratic red tape and having little power to change things were the two largest areas of the progress inhibitors category, but they tended to be closely related. Faculty talked about both as demoralizing and the largest burden of their work.

Comments included hiring clinical staff, as Matthew, a division chief, explained, "months to get the ability to post a nurse practitioner position where the salary is coming from [the hospital system] so it doesn't cost anybody any extra money. Everything we try to do, there's a lot of limitations to it." Additionally, new policies and process that did not

take the practitioner's viewpoint into account were a frustration. McKenna explained, "I think the things that make it harder to have job satisfaction...is when the university designs initiatives that are a burden on the provider, related to [EHR] or productivity or something like that, without, necessarily, thinking the whole process through."

Many faculty in leadership roles within their divisions reported feeling like they did not have the power to make minor adjustments for their groups. Lindsay, a recently-appointed medical director, said, "when someone complains and I don't feel like I can do anything about it is when I feel the most stressed or burned out...someone up high said we were doing this. There's nothing that I can do about it."

Some faculty felt like they had little direction or limited resources for moving forward in their careers. Cheryl, who is looking for a non-clinical niche, stated:

I think I'm probably, what I feel is stagnant right now. I feel like I do clinical very well, but it's not all what I want to be. And I think that's where I'm at in my career now is not knowing which direction to go.

Nicholas discussed frustrations associated with negotiations:

I have a vision for what needs to be here for children's health but people above me don't share that same vision or don't have the ability to invest in it the way they should be or resources are shifted away from us that should be coming to us so you can't really move forward.

Turnover/Unproductive Work Space. Regarding turnover, leaders were both stressed about losing clinical and support staff and about the amount of turnover at the chair level within the department, with leadership at the children's hospital, and with university administration. Unproductive work space provided an additional burden for

faculty, but there was very little consensus about what constituted unproductive work space. In general faculty complained about inefficiency (Maureen, Lindsay, both early-career), and space that was not conducive to productivity (Bill, Cheryl, Denise, all mid-late career).

Faculty qualified their frustrations about these progress inhibitors by showing sympathy toward immediate leadership's inability to fix problems at the university or hospital system level. Chris, who has a strong interest in research and mentoring trainee scholarly activity, has avoided getting more involved with research that required funding, explaining "funding is becoming increasingly challenging, and so, that's not something that's going to change." McKenna was understanding about her division chief's lack of progress: "I think there's been a lot of external circumstances that make it hard for him to get change enacted."

Progress inhibitors added to the burden of faculty feeling their academic and other non-clinical tasks were not always possible to complete. Some of these characteristics were necessary parts of any job – clerical work, patient records – but others are symptoms of system-level policies that did not empower faculty as trusted decision makers.

Leadership. Most complaints about leadership centered around department-level leadership rather than division-level leadership. Faculty voiced concern about leadership's ability to focus on individual needs due to urgency of systems-level concerns. Generally, demands were tangible support categories, but also included comments about different definitions of success and a lack of understanding of stressors.

Department-level Leadership. The most common demand from department level leadership was expectations without resources. Faculty felt the department expected productivity from them without providing time or funding for that productivity. Denise described:

So all of the work has come, but there's been no increased funding to support our work. As a result, we are down personnel for the amount of work we have to do. With all the financial issues at the university, we're really understaffed, so it makes it very, very challenging right now.

Many faculty felt the department was focused on finances and productivity rather than patient care; this differing definition of success was viewed as a difference in values and thus, a stressor. Abby, who tries to maintain heavy teaching and mentoring commitments, elaborated:

I think the department is very focused, at this point in time, on financial productivity and academic productivity with financial implications. I think I would be successful if somebody looks back and says – yes, she was a good woman, she taught me a lot, she made me a better pediatrician or a better neonatologist or yes she was close, yeah I could rely on her, even if she's not professor or whatever and she doesn't have 20 papers, and she was the person I trusted and she taught me something. That's my personal view. But I don't think that's valued that much.

Cheryl, who is in the same division as Abby, added, “And then it became bigger than us. And then it became – oh, we'll just merge everybody in sight. It became about money.”

Faculty also discussed the need for transparent, consistent communication from the department during a tumultuous time. Fred explained, “I had a discussion with [the chair] on Monday that in this climate, there needs to be better messaging. Better is not the right word; there needs to be more messaging and clearer messaging around goals.” Dorothy added, “And, I don’t even think there’s, until they address those issues, there’s no room to even think about us as individuals, ya know. It’s kind of a dumpster fire.”

Division Leadership. At the division level, most comments were about division chiefs who did not understand the workload of their faculty, were ineffective leaders, or with whom they had interpersonal conflict. Camille, who has roles in graduate and undergraduate medical education, commented, “I don’t know if he quite realizes everything I’m doing from the [medical student] standpoint.” Fred talked about his division chief’s lack of interest in faculty concerns: “gets it, yeah. Cares, no. Yeah, I think that, I think we’re, we’ve all, um, we’re all numb to the fact that this is the new norm, and that this is how we should function.”

When she took on a new leadership role, Lindsay expected some direction from her division chief:

There is not any like—here’s a job description or here’s your expectations. It was a lot of like on me to say is this it? Is this what I’m supposed to do? I feel like it might be. Is it? I don’t feel like there’s a lot of support as far as that was concerned so that would help.

Cheryl commented on the lack of mentorship for career development, “when I first started, I wasn’t as happy with it...I think where that started was, especially toward

promotion to associate and all that, I felt like the mentorship wasn't there, as to who it was.”

Fred spoke about interpersonal conflict with his division chief related to lack of visibility: “Typically when there are queries or questions of the division, they come to me and not him, which creates tension. ‘Why the hell is [the department chair] sending that to you? That should have come to me.’”

University- and Hospital System-level Demands. Faculty commented frequently about frustrations with university administration and university finances. There had been a significant amount of turnover within university leadership. Some of this turnover created financial uncertainty that trickled down to the department and division level. Additionally, some faculty felt disconnected from university leadership because of a lack of visibility and perceived lack of involvement of leadership in affairs on the medical campus. Matthew summarized these frustrations:

So I think the reality is that, if the foundation lost a bunch of money and there's potential lawsuits, and there's, the athletic department has got a bunch of public issues, and the finances of the whole university are a real challenge, and the governor has restructured the board, and that's got some uncertainty to it, that trying, they're in a mode, I think, where they just said nobody can do anything, make any decisions, spend any money, at the levels they used do because we have so many issues at a big level.

Some faculty felt little purpose in pursuing academic interests because of this lack of support: “And then obviously financial. If there isn't the funding—if everyone says,

‘That’s a great idea. We can push it through and we approved it but there’s no money,’ like what’s the point?’ (McKenna).

In some cases, faculty felt abandoned by a university with bigger problems:

Yeah, there is significant frustration toward the university. Not that they think, necessarily, any one person who’s in charge right now could have made it different, but there’s just that general sense of – we’re abandoned or we would be better off if it weren’t for those things, if that makes sense. (Nicholas, who serves in a leadership role)

Chris, who practices solely within the hospital, added, “I think, I kind of feel disconnected from the main campus and what the main campus wants. We never see leadership from the main campus.”

Notably, barriers perceived to come from the university level were the most-cited cause of faculty’s intention to leave during this study. Chris, who has considered other career options, explained, “I think if I were to leave, it would be because things became, that the benefits of staying here just started to be outweighed by the hassles of working for, or the difficulties of working for, the university.” Other faculty members (Abby, Fred, Jane, Maureen, McKenna) noted they were willing to stay in their current roles for now and were hopeful for changes with new university administration but also acknowledged intention to leave if they did not see operational change over the coming years.

Most comments about system-level demands revolved around uncertainty about an integration agreement between the local hospital system and the department. Many faculty were concerned about their work assignments if a community-based health care

system took over: “I don’t think [the hospital system’s] heart is in education. I really don’t. I mean, we can say whatever we want to say; that’s not what they’re after. So...but they’re the ones with the money, and, ya know. Beggars are not choosers” (Abby). The other big area of concern was losing university benefits if they became employees of the hospital system. Frances, an early-career physician with young children, explained, “ my biggest concern is – will they change my benefits because my son’s insurance is so good. We pay very little out-of-pocket for his meds and his medical care. We have really good retirement benefits through [the university].”

Intangibles. Academic medical faculty discussed less tangible job characteristics like insignificance, uncertainty, control, and protected time. These feelings did not necessarily fall into any of the aforementioned categories and seemed to embody values faculty held about their positions.

Insignificance. Insignificance was contrasted with the job resource ‘feeling valued.’ Faculty often felt that their contributions went unappreciated, especially during a time when everyone was picking up more work and more responsibilities. Cheryl stated, “And sometimes it makes you seem like you’re not doing enough work because they’re cutting this and cutting that, and you feel like your work is not appreciated.” Maureen added:

Plus I’ve put in a lot of hours and then for some of my resources to be cut or for it to be hard for me to be promoted because I can’t go and do the things I need to do to be promoted, I’ve thought about that.

Uncertainty. Faculty felt uncertainty about the future of their positions. Many inpatient faculty were concerned about whether they would remain employees of the

university or the hospital or whether there would be a job for them at all if the integration agreement happens: “And obviously there’s still a lot of things in flux right now, including the relationship between the department and the hospital” (Chris). Matthew added, “So we’ve got a lot of really good people, but there’s a lot of uncertainty on a lot of different levels that I think is, unfortunately, is kind of the overwhelming theme right now.”

Control. Faculty often did not have control over their own schedules or standing meetings that occurred during or after call shifts. Camille talked about not being in control of her multi-site clinical schedule: “they don’t schedule me at the same time, but I don’t think they, necessarily, look at that so much, when they’re scheduling it, the two of them. Because I’ve had several where it’s back-to-back.” Frustration also existed when a lack of control of surroundings impacted productivity, “I think any time when I have more challenges, be it the workload or things not working right or something that I can deal with in a moment” (McKenna).

Protected time. Though faculty work assignments include time for teaching, administration, or research, this time often got reassigned to patient care. Dawn, an early-career practitioner, discussed wanting more time in the office to pursue educational and mentorship tasks: “I wish that there was more time to pursue the academic piece of my job.”

Faculty also talked about protected time as a resource to doing their jobs effectively: “I think if I had more time, I could feel like I was really good at this job. And I think that...but everybody wants more time” (Tina, inpatient). Jane, an outpatient physician, added:

Just really giving protected time for academic pursuits to make you feel like—to give you a chance to really be something more than just a worker. Protected time because even if I have technically protected time, it doesn't really work that way because you have to catch up on something else.

Job demands ran the gamut from workload issues and progress inhibitors to frustrations with entities beyond their control – department leadership, university administration, and system-level demands. Most of these frustrations surrounded financial difficulties at the university level that are trickling down to individual divisions and departments. Additionally, faculty noted frustration with intangible areas of their work, including control, insignificance, a desire for protected time, and uncertainty.

Faculty discussed workload and progress inhibitors as the two most pressing sub-themes of job demands that affected their daily work. They struggled to find time to balance academic duties on top of extra service time because faculty who have left the university have not been replaced. Integrating with a hospital system without an academic mission created an additional level of uncertainty about their jobs. Faculty in leadership roles felt they had little power to make even small decisions to improve their practices and repeatedly felt push back from the bureaucracy of a large organization that is also dealing with instability around administration and finances. Faculty reported feeling department leadership expected certain output from faculty without providing financial resources or protected time. Fortunately, in these areas and others, resources helped combat the burden of these demands.

Job Resources. Several categories within the job resources theme coincide with those in the job demands theme to create a dichotomy: recovery time/workload,

productivity/progress inhibitors, leadership (positive/negative), university and hospital system (positive/negative), intangibles and value alignment (positive/negative). Faculty also talked about areas of their job that were meaningful. Of note, several faculty members discussed backup plans for employment opportunities outside the department or university that they developed during the turbulence in university climate. The list of categories and total number of coded statements was, admittedly, shorter in these theme than in job demands, but categories of statements were almost identical between job demands and resources, indicating not everything about a certain sub-theme was negative or dysfunctional.

Recognition. Recognition was the largest single category within the job resources theme. Most often, faculty bluntly asked for recognition or commented that more recognition would improve their outlook on their own success and value.

Some divisions strove to recognize accomplishments of their members in multiple arenas: “We start every division meeting every month with a brag slide, so [our division chief] puts up anything good anyone’s done in the last month. Not just clinical and research but in their personal lives as well” (Frances).

More often, faculty stated recognition was a major area for improvement: “It actually was brought up in the division meeting yesterday that we do a lot of things that don’t get recognized. Like, even if it’s just – hey, you’re doing a great job” (Camille); “It will be nice to see some more recognition...they need [MBAs and people with non-clinical skills], but I don’t know that the value is as recognized yet” (McKenna).

Faculty talked about the value of recognition in a few different ways. Chris, a late-career physician, mentioned public recognition of accomplishments at department

meetings: “the department is...taking some time during each faculty meeting to highlight a division that’s done some really neat things.” Dorothy also spoke about the value of public recognition by adding, “it’s always good to get recognition for what you’re doing. So, I won a mid-career faculty award at the last faculty meeting.” In fact, the department broadened its teaching awards in 2014 in an effort to create additional recognition for faculty efforts: “One of the reasons we expanded all the teaching awards over time is to give people a little more encouragement that if they do just a little more in that, they actually might get recognition.” (Nicholas, who serves in a leadership role)

Other times, faculty asked for more verbal recognition of their work, even if it was a quick ‘thank you.’ Camille, an early-career physician, explained, it’s “not that we need awards or anything like that, but there’s just not a lot of verbal confirmation of the things that we do because we’re all doing something.” Some faculty talked about gratitude from residents for taking the time to teach: “You get feedback from residents from their reviews that they really appreciated how you pulled them in and talked to them about their cases and explained to them this and that” (Jane, early-career). Positive feedback from patients was also a topic of discussion.

These forms of recognition appear, at the surface, to be effective motivators for performance. However, in light of the previously discussed constructs of service balance and progress inhibitors, these forms of recognition proved to be discouraging to some faculty rather than motivating. For instance, Cheryl, a mid-career intensive care physician, postulated that everyone deserves recognition, not just a select few, commenting that, “recognition is wonderful, but sometimes the people who work in the dredges is what makes things work. And I think everybody needs that.” Even faculty who

had won these awards felt guilty that their colleagues were not also being recognized for working hard:

I kind of wish we didn't do all those awards because I think it's nice for the people who win them...but what about all the other people that I see working their butts off and taking just as good of care of kids...I guess sometimes it just makes me feel like other people aren't being as appreciated as much. (Dawn)

In addition to recognition of effort and skills, faculty occasionally mentioned the balance of effort put into a job with the reward they got out of their jobs. Jane, who has been with the university less than five years, explained this balance is a determining factor in her intention to stay or leave, "did there come a time when I really felt I was investing more and not getting as much? Yes, I went through that point. Did I consider leaving? Yes, I did."

Recovery Time and Meaningful Duties. To recover from the stressful aspect of their jobs and the presence of multiple demands, faculty built in recovery time activities to rest and check on their colleagues. Often, these times occurred during administrative time or days off: "we try to do things that are collegial and team-building, relationship-building, just checking in. It's such a stressful job...it's an ICU, so trying to build relationships and maintain relationships and friendships is really important to me" (Tina).

Faculty also found meaning in job duties like patient care and education. Abby said, "I think that the best thing that happened to me and the thing that kept me here was teaching." Dorothy, also in intensive care but in a different branch than Abby, found meaning through patient care, even when the hours were difficult:

I don't want a role that will take me away from the bedside because I think that, even though it's really hard, and I would love not to do night call, that is where I get my passion and my drive for the job.

Though their specific interests were disparate, faculty appreciate flexibility to customize their work assignments to their interests. Chris expands, "we've all developed our areas of clinical or non-clinical interest outside of the ICU. For some it's medical education, it's the simulation stuff, it's clinical research."

To help faculty (and staff) gain the tools they need to complete their jobs efficiently and effectively, individual divisions and the department offer professional development opportunities. For example, Denise, who oversees several non-clinical staff, boasted, "We've also done some leadership training to try to improve everyone's skill in that area. I think we have a good working environment." Lindsay, an early-career faculty member, spoke about her experience with department professional development opportunities: "I don't know that it makes sense for every new person to do that [teaching skills program] but at least having maybe a few sessions of, here's a few different teaching skills that you could use."

Productivity. Tools and resources that increased productivity included support staff, productive work space, completion of projects, and opportunities for career growth. About career advancement opportunities, Nicholas said, "burnout avoidance requires some opportunity to develop things that are of interest to you. And through an unusual set of circumstances here, that pathway became available. So here I am." Denise discussed the necessity of support staff: "Well-trained, diligent people, I think. Because if you

don't have people, you can't get the work done. And if you can't get the work done, then you're out of business.”

Leadership. Faculty commented on support, transparency, and a shared definition of success with department leadership as job resources. As department leadership has changed, these resources have been reported more frequently in each successive chair. Additionally, many felt their division chiefs exhibited fairness, mentorship, support and advocacy.

Department-level leadership. Many faculty talked about one-on-one conversations they had had with the department chair. Faculty also appreciated increased communication and clear goals from the department. One example of this communication was, “I think that those 2, 3-minute updates from [the chair] about [the new center] or about the integration or what we know now or any of those things I think are really helpful” (Fred, who serves in a leadership role). Positive feedback from department leadership about their performance was also appreciated, and many faculty determined this positive feedback to imply a shared definition of success.

Division-level leadership. Faculty looked to their division chiefs to be advocates and to provide guidance for career development. Representative comments included, “I think our boss is doing a good job at making sure that we do our work in a way that allows us to get promoted” (Violet, mid-career inpatient) and “I think that she really makes an effort to hire people that she thinks will fit in with our culture, that will be team players, and that will want to support each other” (Dorothy, mid-career intensive care). Culture is discussed more in the section on interpersonal resources, but division

leadership was largely responsible for creating a culture that faculty defined as either an interpersonal demands or an interpersonal resources.

University/hospital resources. Some faculty looked forward to changes brought about by the integration deal or a new university president. Lindsay commented, “I try to be realistically optimistic that this new president is coming. I’m excited that it’s a female. I’m hoping that that means that things are going to get whipped into shape.” Matthew said of the integration with the hospital system, “I would say hopeful. I haven’t been in this leadership role very long and I’ve only been here for eight years so I don’t know where the whole scope of things are.”

Generally, faculty felt they had the resources they needed for patient care. Matthew, who works frequently with health partners throughout the region, explained, “I can get stuff done if it requires the hospital. They make decisions, they have money, they make an investment, they sign a piece of paper, they hire people, they are willing to make changes.”

Intangibles. Within the job resources theme, intangibles included categories like control, feeling valued, and making a large-scale difference. As in the job demands section, these categories are consistent with values rather than tangible support. Almost all faculty discussed the benefits of feeling valued in their positions.

Jane talked about making a conscious decision to surround herself with people who made her feel valued: “It’s a conscious decision to surround myself with people who make me feel good about myself and make me feel wanted and useful.” Feeling valued showed up in transcripts often when topics surrounded learners or patient care: “Medical students are coming, they’re in awe every time they come to the unit. It makes

you feel like you're doing something" (Abby). Similar statements were made when faculty did something – like creating a new guideline (Cheryl) or helping get medical equipment for a hospital in a developing country (Roberta) – that made a difference on a large scale.

Backup Plan. About half of faculty participants had considered some sort of backup plan for employment outside the department or the university. Abby, an intensive care physician, summarized this feeling concisely:

You don't feel stuck. You don't feel pressured. I mean I really feel that, ya know, if, again, if it's going to be the most beautiful thing that ever happened, I can always choose to stay, in different circumstances but choose to stay. And if it falls apart, my ticket out of here is already bought.

Bill, a late-career physician, gave more succinct comments: "If I don't like it, I can retire and quit."

Faculty in this study reported a wide variety of demands, mainly interpersonal and job demands. The climate of the organization has led to faculty feeling overworked as they take on additional clinical time to compensate for a lack of necessary faculty; many also picked up clerical duties because of a hiring freeze that prevents them from replacing support staff. In turn, faculty have less time to devote to other academic pursuits, including teaching, research, recruitment, community engagement, and administrative tasks.

Job resources often mirrored job demands to create a dichotomy of sub-themes. However, recognition was universally discussed as a positive job characteristic. Faculty who regularly received recognition for their work or contributions cited it as a job

resource. Faculty who did not receive regular recognition asked specifically for more and regular recognition. When described as a job resource, leadership valued faculty, recognized their work, and maintained transparent communication about the status of some of the job demands listed above. When they could, faculty tried to build recovery time into their schedules where they could focus on meaningful tasks. When tools and resources for productivity were provided, faculty felt accomplished and took advantage of opportunities for growth.

One interesting topic that came up was the specificity of some faculty members' backup plans. Some made general statements about moving on or retiring, but some had specific plans if demands continued (or started) to outweigh resources. Perhaps these plans were an additional protective factor against uncertainty and feeling undervalued.

Interpersonal Demands. Interpersonal demands discussed by faculty include colleague conflict, family stressors, challenging learners, and difficult patient families. Relationships with colleagues varied highly in faculty responses from overt conflict to high levels of support to minimal interaction. Comments about colleagues seemed to fall predominantly into either demands or resources and were not often a mix of both. Because colleagues spend so much time together in many practice settings, it can be argued that these relationships play a strong role in driving or mitigating burnout. Of note, the same broad categories also appeared as interpersonal resources.

Colleague Conflict. Conflict between colleagues was, by far, the largest category of interpersonal demand. These conflicts tended to fall within these categories: in-group and workload-related conflict. Certain areas of colleague conflict were more prevalent in certain divisions than others. Faculty within the Pediatric Intensive Care Unit (PICU)

talked about in-group relationship demands at a much lower rate than did faculty in other divisions (less than one mention per participant compared to more than seven mentions per participant in the Neonatal Intensive Care Unit [NICU]). The NICU had a very high rate of workload conflicts as well but did not talk at all about difficult families. General pediatricians did not complain about challenging learners. Medical directors and division chiefs spoke less about workload conflicts than non-leaders.

In-Group Relationships. In-group relationships included specific groups like cliques and those with a different level of power and included feeling the need to justify their jobs to colleagues and the burden of office politics.

Office politics comprised the most comments of all the in-group relationship comments within colleague conflict. More than half of participants commented on feeling conflict through office politics. Medical directors and division chiefs tended to experience political conflict in multiple arenas, as John noted:

Another part of it is, and I'm right in the middle of it, is politics. There's politics no matter where you go. Doesn't matter if it's little politics or big politics. There's a lot of big politics here, not only between the health care systems but within the university itself.

Tension felt from office politics was felt throughout the faculty, however:

But I've never been one who likes wishy washy, and I hate having to couch words in a politically correct way. I think I can be truthful and still be nice about it. But I'm not sure that it's something that this environment likes. (Cheryl)

Within divisions, small groups of faculty develop that are supportive toward each other but may not interact much with division colleagues outside the clique. Abby, who

works with Cheryl, discussed this relationship further, “I think with time, there are little groups that are formed of people that support each other, but not at the division level.”

When asked if the groups felt maliciously toward each other, she added, “no, just indifferent. Yeah, so you don’t really mix with the other people unless you absolutely have to.”

Additionally, inter-group interaction did not occur freely when few similarities existed between practitioners: “there’s been such big turnover in the nursing staff, that I don’t know a lot of the nurses by name anymore. They’re also young enough to be my children, so that makes the relationship feel a little bit different” (Chris). At times, this conflict was mediated by different roles and perceived levels of power within a division, as John explained, “I think, again, because we have a faculty, a large faculty and a large staff, I think that there’s always that tension between the differences in roles and responsibilities and what needs to be accomplished.”

Faculty also felt parts of their job were not well understood by their colleagues, both within their own divisions and in other divisions within the department. Physicians who work in the intensive care setting spoke about frustration with colleagues who do not understand the intensity of their work:

Like how bad it can be when we respond to a rapid response on the floor, and it’s not really rapid response. It’s that someone is dead, and we code them and we put them on ECMO and we bring them back to the unit, and they bleed, and they’ve had a stroke, and they need dialysis, and we can’t manage their lungs. I think that the true intensity and scope of what we do in the PICU cannot be appreciated by people who don’t work there. (Tina)

Another area of misunderstanding in some divisions was not being present in the office during regular office hours. In some divisions, faculty felt free to work from home or take days off during the week to make up for hours on service and night shifts.

However, in divisions with less supportive colleagues overall, faculty felt the need to be accountable by spending long hours in the office, even when they were on service. Abby explained: “there’s always a big misunderstanding of the way we work...the fact that I worked 24 hours before and I’m not there a certain day, they see me as not there, as having time off.” Cheryl, who works within the same division and is not in Abby’s clique, adds, “People see it as they think we don’t do much, but no, we work hard.”

Workload Conflicts. Workload conflicts centered around individualism and buy-in within a division but also included incivility between colleagues as well as feelings that colleagues were not committed to excellence in completing their job duties, including in patient care.

Individualism was discussed most often as faculty concentrating on their own projects and promotions without regard for the greater division or their coworkers. In other cases, individualism was felt due to a lack of team structure, as explained by Bill: “It’s not a team service...the team is your residents and your students...It’s not the rest of the group because there’s not any real productive interaction across those lines. There really isn’t. Could be, but there isn’t.”

This individualism was also felt as a lack of buy-in to help with new projects or initiatives led by faculty. Faculty are typically understanding that their colleagues are overworked and do not have time to take on additional projects sometimes, but frustration still exists: “we need to do more. I mean, our division. We really need to do more, but I

think, the incentives are not there, especially if you don't have people [that] are interested" (Cheryl). Faculty reported incivility – small acts of aggression – from their colleagues in areas like patient care:

Every once in a while you'll come in in the morning, you're on service, you're directing care for the team, you'll give them specific instructions – this is what I want to happen overnight – and you come in in the morning and are like, "Why is this kid on a rate of 40 when I asked you not to increase their rate unless their gas was this?" (Dawn)

– and communication. Jane elaborated, "you make suggestions, and they're like – we've talked about this before – and apparently they've talked about it for years, and it falls on deaf ears, that's what cultivating the frustration within the division."

Perhaps most disturbing was the attitude that colleagues were mediocre or not committed to excellence in their work. "I think [my] division is mediocre, quite honestly. That frustrates me sometimes, and that's a colleague issue. I think it could be a lot better than it is. From the top down" (Bill). Jane questioned the motives of some of her colleagues, "Sometimes you wonder if people are here just because they don't have any choice or because, again, they get away with doing little and getting much in return."

Colleague conflict ran the gamut from small acts of incivility to questioning the competence of professional motivation of coworkers. For medical practitioners, these stressors fell on top of the stressors of being a physician (job demands) – patient care, long hours – and may have been additional barriers to productivity rather than a completely isolated category of stressors. In some cases, academic medical faculty

worked 24-hour shifts or longer, then spent additional hours in the office so their colleagues believed they were pulling their weight.

Often, faculty were relatively siloed within their own divisions and did not have outside support for new projects or know where to go to learn about research, so they felt stagnant and unsatisfied in their work. Interestingly, this conflict was not reported universally but rather within specific divisions, unlike comments about family, learner, and patient demands, which were scattered throughout responses.

Family stressors. Faculty talked about conflict with family members as stressors but also discussed the burden of major life events, and frustration about parents with regular work schedules. Interpersonal conflict was present periodically in many households. More often, family conflict about work, specifically, was viewed as a stressor. Frances discussed conflict about missed family events, “I missed my son’s basketball game this weekend. There have definitely been marital disputes in our past, where I’m like, ‘If you want someone who can clean the house, you should probably choose someone else.’”

Some faculty expressed frustration about missing important family events, even when it did not cause additional conflict. Occasionally, faculty talked about feeling frustration toward parents who worked regular business hours. “They technically have a PTA for the daycare...I’m sure there’s a purpose, and I appreciate what they do, it’s just not me. And I’m sorry I don’t have 2:00 on a random Tuesday to come to your meeting” (Camille, parent of young children).

Major life events also played a role in faculty stress levels. Several participants dealt with births, deaths, or other big events that caused them to rework their schedules

and priorities. Lindsay, who has a young child, remarked, “life revolves around feeding a baby so I'm either actually feeding him or pumping or cleaning bottles or cleaning pumping stuff. That's kind of extra time in my life that I'll never get back.”

Challenging Learners. Overwhelmingly, faculty enjoyed their time with learners and spoke about them as one of the reasons they pursued academic medicine and as one of the most rewarding parts of the job. However, when those learners were challenging or slowed down their efficiency, they were seen as stressors. Tina summarized this balance succinctly:

Sometimes the residents, they alter the workflow in really variable ways. They do a lot of the work, and sometimes they're a lot of fun to work with. Sometimes they're really stressful to work with. We have one right now who doesn't care for us as a group and has made comments about the fact that we don't care about the patients, which is untrue. So it just keeps you on edge a little bit more.

Teaching while on service was considered a stressor when faculty needed to repeat content for revolving groups of learners: “it really slows you down when you're having to do your spiel about [the care unit]...I have to explain everything – let's go over every single physical exam on this patient because you're never going to see it again”

(Camille).

Difficult Families. Most often, comments about difficult or obstructionist families were made by faculty in intensive care divisions. The exception was families who showed up late to outpatient clinic appointments and delayed the schedule for the remainder of the day. Within intensive care units, faculty were frustrated by families with

differing beliefs regarding their child's care and by families who impeded their child's care and impacted the safety of practitioners:

For me, the absolute thing that I hate the most about my job is dealing with difficult families. I take it extremely personally when they yell at us or they're upset with the care or they...I feel like we take a lot of verbal abuse. I've been punched. I've been yelled at. I've had my life threatened. For me, that's the part of my job that I hate the most (Dorothy, intensive care).

Faculty spoke about a broad range of interpersonal stressors, but the most prevalent was conflict with colleagues. This conflict was discussed frequently and seriously enough to consider it a major theme in driving burnout. This difference between colleagues as a demand and colleagues as a resource becomes more apparent in the next section. Family stressors seemed short-term and most often revolved around conflict about work and major life events. Challenging learners and difficult families were stressors for some faculty but most notably in teaching-heavy and intensive care arenas, respectively. Family, learner, and patient conflicts were discussed as stressors, but relationships with these groups were typically overwhelmingly positive and meaningful.

Interpersonal Resources. Sub-themes within this category were much more evenly distributed than interpersonal demands, but emphasis was still placed on relationships with colleagues. Again, participants who described their colleagues as supportive generally did not also have comments about colleague conflict. Interpersonal resources was the area where faculty most discussed finding meaning in their work, especially in interactions with learners, patients, and families.

Interpersonal resources were discussed within similar categories to interpersonal demands –colleagues, support systems (family/friends), learners, and relationships with patients and families. As with demands, faculty in certain divisions talked about these categories differently. PICU and NICU faculty spoke more often about relationships with patients and families. Faculty in subspecialties that have inpatient and outpatient components commented often about their colleagues; the hospitalist division did not mention teamwork at all.

Colleagues. As in the interpersonal demands section, comments about colleagues made up the largest share of comments about interpersonal resources. In many cases, faculty spoke about the culture within their divisions as collaborative, cohesive, encouraging, and supportive. Additionally, PICU and behavioral/development faculty spoke about resources that included taking a team approach to care, willingness to work together and sharing values (i.e. the importance of family events over work).

Culture. In many cases, faculty talked about the culture in their divisions separately from their relationships with colleagues (Interview 1 asked specifically about division culture). Faculty talked about collaborative culture, “everybody coming together, and everybody finding a niche in each of those things to make them all work together...I think everybody works together” (Cheryl, who responded favorably when directly asked about culture but described individualism and trouble getting buy-in from colleagues when probed further). Most of the comments about cohesive culture came from PICU faculty who, discussed poking fun at their colleagues but also defending them outside of the division. For example, Dorothy joked:

As a group, I feel like we're a united front. I think that, ya know it's funny because we were talking the other day about one of our faculty members, and we were like, 'Oh my gosh, he's such a nerd.' But somebody else texted back, 'Yeah, but he's our nerd.' (laughs)

Often, faculty felt their colleagues were supportive and encouraging. In one instance, Maureen, from a small division, said, "I know one of my colleagues is out of CME money and she has a presentation to give, and so we're kind of pooling our division's—who hasn't used all their CME money so that we can help."

Individual-level Support. Faculty felt supported by individual and groups of colleagues, especially in times of personal crisis. Across all divisions, faculty were willing to cover service time for colleagues who had personal emergencies:

We've had some situations where people needed help or had health or family problems, and everybody pitched in and supported. I've never been in a situation where I had to switch a day, even on very short notice, and I didn't get somebody to help me. (Violet, inpatient)

In many cases, that support extended beyond crisis and into daily work life.

Taking a team approach to care made faculty feel more comfortable in their decision-making and care of patients. Jill, a subspecialist, said, "it's always a good thing to talk about the patients and make sure you didn't mess up really bad... That's always positive, even if you are tired and checking out and all of that, it seems to be positive."

Often, faculty members had a support group that went above and beyond the call of duty of coworkers. Chris, a pediatric intensive care physician, explained, "I think the best way I could describe our division is that we're coworkers and friends. Everybody

loves everybody else.” Sometimes colleagues were more than just colleagues: “That confidant of mine spent a lot of time really bouncing off ideas. She let me rant. She saw me cry several times. She saw me curse” (Jane, outpatient). In some divisions, colleagues were willing to cover so faculty could attend family events: “If I need to go see something with my kids, somebody will switch my call or they’ll cover for me for a couple hours so I can go watch my daughter run her first track meet or something like that” (Dorothy). Chris discussed the team approach and the benefit of never feeling alone:

If I need help and there’s 3 of us in the unit but 4 kids need a person at the bedside right now, all I have to do is send a [HIPAA-compliant text], and whoever’s in the office will come over and help out.

In many cases, collaborative or cohesive culture came from the top down and was perceived to be a constant focus of division leadership. When these types of cultures existed, values were more likely to be shared and faculty were more likely to feel supported, even if colleagues did not consider their coworkers as friends. Of note, faculty in all divisions and settings spoke about colleagues’ willingness to cover shifts and duties during illness or personal crisis regardless of whether the overall tone toward colleagues was negative or positive.

Support Systems. All participants commented on support systems as resources. Most often, this support came from family and friends. Comments included, “I have, I think, the last fantastic man on the planet as my husband. No matter what I say when I come from work, no matter what I do, he has a supportive word for me” (Abby), “I think all of my critical care colleagues would agree, a lot of it is having a spouse that supports that decision” (Frances), and “some other friends that I can’t share a lot of this with, but

the extrovert part of me, just hanging out with other people, gets recharged a bit” (Nicholas).

Beyond friends and family, many faculty made use of hired help as a resource. Most often, this help came from a nanny who worked around erratic work schedules of academic medical faculty. Roberta, who has young children, said of her nanny, “You don’t have any idea how many less fights and problems we have at home because she comes.”

Religious practices also provide balance and perspective for faculty, as articulated by McKenna, who values spirituality over social contact at times: “This is where my faith comes in because I think it gives you a perspective outside of your circumstances or situation. When that happens, I mean I joked about it, but you realize it’s not the end of the world.”

Learners. A few faculty made comments about challenging learners or learners slowing the pace of the day, as discussed earlier, but overwhelmingly relationships with learners were positive. Faculty enjoyed their roles as mentors to trainees and talked about the reward of seeing learners understand a concept or move forward and show progress in their training. Additionally, learners often take on the burden of note-writing.

Mentoring residents and fellows clinically and academically was a rewarding experience for faculty. Tina, who spoke at length about being engaged in teaching, said, “I realized that somehow over the last nine months we had taught her how to think, and that is hugely engaging on all the levels of my job.” Chris added, “to be able to help trainees get to the point where they’re seeing themselves in a position to succeed, and when they see, when they feel that success themselves, it’s really cool.”

Seeing residents and fellows move toward independence and accomplish their own goals was very rewarding for faculty. Discussing her teaching role as residents rotate through her service, Dawn boasted:

This is the first year I can really compare a second year from last year to a third year now...it's just so cool to see how much they change and grow and how much more familiar and comfortable they are between their second and third year. And you know you're a part of that educational process.

Faculty on more demanding services talked about learners easing the workload: "I had two wonderful residents and I didn't feel that burned out because they were good. They did good notes so it was a lot easier for me just to document...I actually slept six hours every day" (Chris).

Additionally, there were a few comments about learners being interested in the rotation or curriculum. Maureen summarized:

I like when trainees are really excited about what I do because I'm really excited about what I do. Recently we just had a couple of trainees that were really excited. They were really good, and I loved having them on service. I think they liked being on service. That doesn't always happen but that kind of rejuvenated my spirit with respect to teaching and training because sometimes the experiences aren't the best.

Relationships with Patients and Families. Comments about relationships with patients and families were heard most often in intensive care settings, most likely because patients are admitted longer and faculty have more time to develop relationships. However, faculty in all divisions and work roles discussed this topic.

Helping parents prepare and care for sick children was seen as rewarding, as discussed by Matthew, a subspecialist:

Very often, I'm telling them they have [a severe illness]. I joke that, early on, it's my job to make people cry because they come in, and I'm explaining – this is what I can see, this is what it means, and it's kind of a big deal – but if we do that halfway through pregnancy and then follow them up, they've been trained as super parents.

Developing close relationships with families, especially in the intensive care setting came with emotional highs and lows:

And acknowledging that there's grief. There are some patients that touch you more than others. We had a loss in the ICU early last month. I came in to say goodbye to the kid and say goodbye to the family. Went and sat in the call room and cried and cried and cried. Drove out, went to the funeral. Then, came back to work on Monday morning. I think you have to acknowledge that there are going to be families that touch you. (Tina)

Talking about positive outcomes and children who are resilient, Chris told a more positive story:

The one kid was, like, with us for several months as a baby before he got his transplant and had a rough go after the transplant. And we were all – is he really going to be able to pull through all this stuff? And we all threw a little party for him. It was great.

Interpersonal resources created meaning for many faculty at their jobs. Supportive colleagues understood stressors and helped faculty make sure they were practicing self-

care. Interested learners and relationships with patients and families made service time and teaching roles meaningful. Family support was a common resource across divisions, roles, and practice settings.

Job demands had a large number of sub-themes that played a role in driving burnout. However, interpersonal resources were where meaning was found for academic medical faculty. Across this sample, interaction with learners and families was almost universally positive, except where the safety of practitioners was a concern. Seeing growth in trainees and providing hope or equip families to care for sick children were defining moments for these faculty.

Personal Demands. Academic medical faculty identified two categories of personal demands - personality factors and reactions to job factors. All cited demands were personal characteristics that prevented faculty from performing their jobs as efficiently and/or effectively as they could. These personality factors encompassed negative feelings about their own ability to manage time and workload appropriately and generally affected the amount of time and energy they could spend with family and friends outside the work environment. These factors were generally discussed as minor contributing factors in relation to interpersonal and job demands. They are reported below but do not play a major role in determining burnout.

Personality factors. Personality factors included guilt, the inability to say no, and inefficiency. Faculty sometimes found it difficult to connect with family members:

I used to call my grandma and call my aunt and call my mom. I'd take the dog for a walk and call her on the phone or call in the car. And now I don't do that ever

anymore 'cause I don't feel like there's any time...I do miss those things.

(Camille)

Other times, their own ability to say no to new and exciting tasks increased the stress on faculty members because it spread their time too thin. Chris explained, "and then I guess the other stress is there are always deadlines with other non-clinical things going on. And I'm sure I've done some of this to myself because I haven't said no to things that I should have."

Regarding efficiency, some newer faculty discussed their lack of experience as a barrier to efficiency. As they became more comfortable in their roles as attendings, some of this inefficiency resolved, and they were able to better prioritize their time. In other cases, inefficiency was mediated by other personality factors. Dawn said:

I'm also anal retentive, so I spend a lot of time going back and checking things, which probably not all of my colleagues who maybe aren't as detail oriented as I am, maybe they don't spend the time doing those things.

Reaction to Work Factors. Within this category, topics like procrastination, self-imposed responsibility, and reactions to the weight of the job were noted. Some faculty acknowledged that age made the physical demands of the job – travel, night shifts – more difficult. Procrastination was included in this category because it was mentioned in relation to deadlines and personal wellness rather than as a general personality factor. Bill, who talks about the benefits of being late in his career, explained that he chose wellness activities over work when he could but that was not always possible:

If I don't have something squeezing me, I'll put it down and go out. I can get away from it that way. If I've got something squeezing me, I'm a procrastinator

like most people. And I'll put it off until I don't have any more time, like my [annual review document] I did at 3:00 this morning. So, but I'm not averse to putting it down.

Self-imposed responsibility was mentioned by nearly half of respondents as a stressor. Faculty took on responsibilities that have not been assigned to them or that are beyond their control because they want to provide quality care or ensure a process is completed efficiently and effectively. Dorothy discussed the opening of a new unit:

I do feel like I, and some of this maybe is self-imposed, but I feel like I shoulder a lot of the weight for growing the cardiac ICU, to make sure we do a good job from a nursing level to a physician level and everything in between. I don't control a lot of that, right? I don't get to decide who the respiratory therapists are. But I feel like I am somehow responsible for all of that, at least partly.

Older faculty noted that their age made the physical demands of their jobs more difficult. As they have gotten older, faculty have a more difficult time recovering after service or night shifts (Jill, John, Chris), physically examining patients (Fred), and international travel (Bill). Even though many would like to cut back their service time, all respondents expressed a desire to continue to be involved in patient care as at least 25% of their work assignments because of the rewards of the job.

Personality factors and reactions to the work environment were discussed as personal demands. The theme of inefficient or ineffective work ran through these demands; this theme appeared as a major sub-theme in the job demands theme as well, providing some connection between personal and job demands by way of barriers to productivity.

Personal Resources. In this sample, personal resources listed were all coping mechanisms to deal with personal, interpersonal, and work factors. All faculty participants discussed coping mechanisms they used to counteract stressors at work, leading to a strong conclusion that faculty are aware of the need for coping skills or practices and have implemented them as their schedules allow. This included avoiding drama at work, choosing to stay positive, and setting personal goals. Of note, no faculty utilized skills workshops or classes offered by the organization as personal coping strategies.

Some faculty chose to avoid drama in the workplace by restructuring their time for productive activities like teaching and learning or by choosing not to attend meetings and events where dramatic interaction was expected.

Bill talked about avoiding certain work areas:

I mean, the [division office], you ever walked in there? You can't work in there. Are you kidding? It's a hair dresser's gossip salon, and I go in there to do my billing because it's the only place I can do my billing. But other than that, I don't have any interest in that.

Camille, an early-career physician, avoided meetings that add to her stress, even though they include information about the future of her division, "I have chosen not to go to those meetings because I feel like I won't contribute, and it's just going to stress me out, so I don't go."

Rather than simply avoiding negative interactions, many faculty chose to stay positive regardless of the stressors happening around them. Tina noted, "looking for the

positives, it sounds like a very kindergarten mentality...if you want to look for the negatives, they're all around you, but you have to look for the positives, too."

Faculty often set personal goals to achieve small wins in their personal lives even when they were stressed about work. Some set fitness or exercise goals; Abby, who was planning for her first race, spoke about running a mini marathon, "and I don't want to walk at all. That's my goal. I don't want to walk it because I wouldn't feel like I did it. But if I run slow, I'm going to run the stupid thing and be done." Other faculty set goals to limit their interaction with work while they were at home (to limit the burden of Service Balance [home]); Maureen's goal included not checking up on work at night because she was, "going to bed with work on my mind whether it was patients or writing a paper or research or whatever."

In addition to individual coping mechanisms, all participants talked about active coping mechanisms like exercise, hobbies, and family time. In some cases, exercise and hobbies were long-term practices, but in other cases, they were adopted in reaction to increased stress at work or after noticing the onset of burnout symptoms. Nicholas, a late-career subspecialist, recently started playing tennis again to relieve the stress of his job:

More recently, the last 2 weeks in fact, I have gotten back on the tennis court for the first time in 11 years. I hadn't played since I moved here. So that is something I'm trying to pick back up and have had some ongoing attention to some exercise, but adding that in as well.

Violet fulfilled a childhood wish, "I went and bought a piano, and I started taking lessons."

Moreover, faculty understood the value of continuing to exercise and practice hobbies. Though these activities often got neglected during busy service times or seasons, faculty made an effort to make sure their work lives were balanced with wellness activities:

It's always been really important to me to have life outside of work or to integrate my two lives...Even as a resident I had season tickets to the basketball games and went to concerts. I didn't want my job to be all consuming, although it is in a lot of ways, but I have other passions and I wasn't going to give those up. (Maureen)

In addition to noting current hobbies and activities, almost half of faculty members reported a new activity, hobby, or goal they had started between the first and second interviews. At times these activities were directly related to work stressors and included extended family vacations and setting goals to improve their service balance (i.e. not working from home).

In discussing personal demands and resources, faculty discussed traits that prevented them from completing work efficiently and/or effectively or otherwise affected their relationships with family and friends. These traits and practices might have been sources of some stress, but they did not appear to significantly contribute to burnout. On the other hand, faculty had coping mechanisms in place to mitigate demands. Often, they talked about the importance of these activities as protectors against burnout, even if their schedules prevented them from exercise or hobbies at times. Also, that faculty did not discuss university-sponsored wellness activities positively or at all should be considered when planning these activities moving forward.

Summary

Though personal demands and resources were reported, much more emphasis was placed on interpersonal and job demands and resources by faculty. Many made an effort to compartmentalize their work and home lives or work from home after their kids had gone to bed. Personal stressors – deaths in the family, conflict at home – may have added to stress, but faculty seemed to find other support systems when this was the case (Chris, Cheryl, both intensive care physicians). Personal factors were not a major source of stress in this study, and most faculty cited family support and intentional family time as stress relievers.

Even though many academic medical faculty were overwhelmed by trying to maintain a balance of service time and academic time, most were acutely aware of the need for wellness activities and support systems and had employed these systems at home and at work. Support varied between divisions, with the PICU spending a lot of time recognizing faculty accomplishments and building a culture of support. Other divisions, like the hospitalist and NICU groups, did not have these support systems in place for their faculty; even so, faculty in all divisions were quick to step up to support their colleagues in times of crisis.

The most common job demands were workload – trying to balance clinical duties with non-clinical duties and home responsibilities – and progress inhibitors, which often put additional barriers on faculty members' ability to complete the non-clinical portions of their jobs. Even with university and hospital system stressors around administration and financial issues, department leadership placed expectations on faculty without providing the resources to meet them. Job resource sub-themes closely matched job

demand sub-themes, indicating (a) no single job characteristic was universally interpreted negatively, or (b) the same job characteristics were viewed as demands by some faculty and resources by other faculty.

As a balancing factor to job demands, interpersonal resources provided support and meaning for academic medical faculty. Participants reported very different interactions with colleagues, but they all found support systems in their family and friends and through smaller groups of coworkers or colleagues outside their divisions. Faculty valued relationships with learners and patients and their families as areas that provided meaning to their work. Additionally, faculty had personal coping mechanisms in place to mitigate work stressors (and interpersonal stressors as applicable). These personal resources were well-developed, even if faculty struggled to practice them as often as they would have liked due to busy schedules. Personal factors and other personal demands were well-defined but did not appear to play a salient role in burnout.

CHAPTER 5: INTERPLAY OF FACTORS AND THEIR IMPACT ON BURNOUT

In Chapter 4, academic medical faculty interpretations of demands and stressors were described and connected based on the ways they were talked about in interviews and connections faculty made between their own personal, interpersonal, and job characteristics. This chapter focuses on comparison of these demands and resources by practice setting, division, faculty role, and self-reported burnout level. These comparisons present the contextual nature of characteristics, specifically job and interpersonal characteristics, in driving or mitigating burnout. The most salient themes from Chapters 4 and 5 were used to create a model of the pathophysiology of burnout in academic medical faculty. Because this model is built on overarching themes rather than the nuanced sub-themes of this specific study population, it is expected to transfer between departments or organizations.

RQ3: How does the interplay of personal, interpersonal, and job factors impact burnout in academic medical faculty?

Faculty defined many personal, interpersonal, and job factors as either demands or resources. However, though these factors play a role in driving or mitigating burnout, how they work together to do so is not clear from a simple list. This section will compare and contrast factors that appear in different divisions, practice settings, and job roles with

the goal of determining patterns of demands and resources that interplay with each other to determine burnout.

Faculty discussed interpersonal resources as buffers to job demands, especially colleagues to help alleviate Service Balance (home) demands and barriers to productivity. Universally, the most cited demands were service balance (home) and service balance (work). These categories were most prevalent with faculty members who worked irregular hours at least part of the time but appeared in the majority of interview transcripts. Faculty with children at home often brought work home with them but waited until their children went to bed before working on it, leading to late nights and extra stress. Irregular hours and picking up extra shifts contributed to conflict at home: “If I do 7 days on and 2 calls the next week, that means I’m home maybe 24 hours total in a week and a half. So that can be tricky about how the time is distributed” (Frances, intensive care).

These hours also cut into the time faculty have to pursue academic interests, thus leading to other demands like feeling the department had expectations without the resources to meet them, desire for protected time for academic pursuits, giving up teaching at the medical school, and reporting poor job fit.

Most faculty discussed family support and colleague support groups as resources. Conflict with colleagues was, by far, the most common interpersonal demand, dwarfing stressful interactions with family, learners, and patients/families. However, colleagues that provided day-to-day support and a sense of belonging through a cohesive culture were interpreted as a strong buffer against shared work stressors. Even within divisions with less positive climates, faculty tended to find smaller groups of colleagues that

supported each other. Some divisions relied more heavily on colleagues for support than others, as discussed below, but family support was universal. Family members act as sounding boards, help with difficult scheduling issues, and make sure faculty take care of their own wellness activities. See Table 6 for a summary of these factors.

	ID: Colleague Conflict	IR: Colleague Support	IR: Division Leadership	IR: Learners	IR: Patients/Families	JD: Workload	JD: Progress Inhibitors	JD: University/Hospital System	JD: Clerical/E.H.R.	JD: Feeling Insignificant	JD: Uncertainty	JR: Feeling Valued	JR: Flexibility/Variety of Roles	JR: Patient Care	JR: Backup Plan
Outpatient	x								x	x					
Mixed		x				x	x						x	x	
Inpatient				x	x	x		x							
NICU	x			x								x			x
PICU		x	x	x	x	x		x			x				
Hospitalist		x		x		x									

Figure 3. Demand and resource themes by practice setting and division. This figure compares reported demands and resources by participant practice setting and division.

Comparison by Practice Setting. Faculty in inpatient and outpatient settings had very different work environments and patient populations. Differences in stressors were noted between these different settings as well as in different divisions within the inpatient setting. Not surprisingly, faculty who worked primarily in an outpatient setting discussed stressors related to the demands of working closely with different providers and entities more so than faculty who worked in a mixed or inpatient setting, where demands revolved around balancing inpatient service time and barriers to productivity. Inpatient and mixed setting faculty also spoke more about relationships with learners and patients/families and their interactions with colleagues (positive and negative).

Outpatient. Outpatient settings represented by study participants included general pediatrics ambulatory clinics, the child behavior/development center, and the emergency department. In this sample population, all four faculty members showed more signs of burnout – emotional exhaustion, cynicism – at the second interview than during the first interview. There was not a universal theme among demands, but faculty mentioned the burden of clerical work and EHR, a power differential between physicians and other clinical staff, and feeling insignificant. Additionally, office politics and conflict with division chiefs were also discussed, though these demands are not necessarily limited to or defined by the role of an outpatient faculty member. Comments about these stressors included, “I’m an outsider to some degree because I’m not a physician” (Fred) and “are we that catering to everything else everyone else says, or are we going to stand up and say we’re not compromising the quality of the care we’re providing in [our division]?” (Roberta, outpatient).

More so than other practice settings and divisions, outpatient faculty talked about the need for recognition and feeling valued. Faculty often found smaller support groups that made them feel valued and avoided the drama of conflict, the power differential, and conflict with division chiefs. Jane, an early-career outpatient physician, explained, “I think it was very eye-opening, very humbling – at least you’re appreciated. So you want to perform better because you’re acknowledged.” Recognition was discussed as a result of teaching learners rather than acknowledgment of contributions or accomplishments from leadership. The lack of reward from relationships with patients and families is likely a culprit in this finding; outpatient faculty visits are typically 20 minutes to a few hours with limited or no follow up.

Mixed Practice Settings. Many subspecialties within the department see patients both in the hospital and in outpatient clinic settings. Like outpatient faculty, they typically have service time each week working two or three days in clinics; they also work service weeks in the hospital setting. In this study, two mixed practice subspecialties were represented. Service balance (home) was the dominant sub-theme among participants, as some divisions travel throughout the state for travel clinics and other responsibilities while others field calls throughout the night or may need to return to the hospital after hours for patient care. No faculty in this group classified themselves as burned out, but comments were made that were consistent with burnout.

Demands tended to be division-specific in this group. In one division who takes care of complicated patients with multi-system illness, faculty talked about the intensity of patient care as a demand. Even though acuity is not typically high, patients are often complicated and late in their course of treatment: “When they call us, they have already been on antibiotics – several of them. The fever has been ongoing for days or weeks, and nobody has figured it out. They are not simple” (Jill, subspecialist). In another division, faculty talked about a similar dilemma but often patient care was seen as a resource because of the problem-solving element involved. Instead, these faculty talked about more power-related demands: bureaucracy, little power to change things, and uncertainty. Matthew, a division chief, commented, “So we’ve got a lot of really good people, but there’s a lot of uncertainty on a lot of different levels that I think is, unfortunately, is kind of the overwhelming theme right now.”

Among subspecialties, faculty viewed flexibility to customize the academic portion of their work assignments and the variety of work as major resources. Many

faculty have developed niches in clinical and non-clinical areas in addition to their regular clinical duties. McKenna, a subspecialist, explained:

That's one of the things I like about my job, and this specialty and this job description is that there's variety in that, not just for, to stay interested in what I'm doing but also for pace.

Faculty also talked about the benefits of a team-based approach to care: "A lot of our patients are complicated enough that they need [invasive procedures], and [a subspecialist]" (Matthew).

Inpatient. Faculty who work in inpatient settings typically do one to two weeks of service at a time and may have night shifts or take call in addition to those duties. Patients typically require more active care since they have been admitted to the hospital.

The most common demand discussed by inpatient faculty was service balance (work), trying to find time between service commitments to complete academic or administrative tasks. The three inpatient divisions represented in this study all had openings for additional practitioners, meaning they were working more clinical time than is written into their work assignments to make sure their units are adequately covered by physicians.

These faculty are, nonetheless, protective of their academic time and cite it as a reason they chose to work in a teaching facility. Accordingly, many of these faculty were concerned that an integration agreement with the hospital system might threaten their academic time even more:

I worry about how much [the hospital system], in spite of some protestations from them that they do, understands academia and research in terms of the new subsidy

for that within the department. I'm afraid it's going to get short-changed because [the hospital system] is a bottom line institution. (Bill, late career)

Probably because of their roles as longer-term care providers – they care for patients over a number of days to months rather than single visits – relationships with patients and families is seen as a strong resource for inpatient faculty. Many also talked about learner growth and time spent with learners. Often, these two resources were concurrent: “My interaction with the residents and students on rounds together with the family are being successful towards a diagnosis and good patient care, and just providing them with that bedside role model that they need” (Violet, inpatient).

Demands differ by practice setting for a variety of reasons. Inpatient and subspecialty faculty talked about how the acuity of patient care and other aspects of the job were anticipated and, thus, are not major stressors. Matthew allowed, “the clinical work that I do, it will always be, to some degree, stressful by the nature of [the specialty].” Demands cited most frequently by inpatient and mixed practitioners had more to do with barriers that were outside of their control – the integration agreement, bureaucracy at the university level. Outpatient faculty tended to be plagued more by demands within their own clinics like clerical work and the power differential between providers.

Trainee and faculty schedules are typically inconsistent at outpatient clinics, and this lack of continuity could be a reason learners and teaching are not common resources for these practices like they are with inpatient settings. Rather, outpatient faculty talked about finding ways to feel valued in their work; likewise, mixed setting practitioners talk

about flexibility, variety of roles, and a team-based approach as ways their work is made more meaningful.

Comparison by Divisions. More specifically than practice setting, characteristics were compared by divisions to tease out elements of culture or climate that were variable. Outpatient and subspecialty divisions were not well-enough represented to make direct comparisons between divisions separately from practice settings. However, differences in demands and resources did exist between inpatient divisions, especially between the Neonatal Intensive Care Unit (NICU) and the Pediatric Intensive Care Unit (PICU), whose patient care duties are very similar but whose division climates are very different.

The hospitalist division did not describe a universal theme between demands and resources other than the service balance and support themes noted for all faculty above. Some faculty talked about difficulty getting caught up after service time, especially those faculty whose service time is split between the main hospital and an off-site facility. Interestingly, not being able to catch up was not talked about by faculty members whose work assignments included travel clinics and other mixed-site assignments.

Faculty talked about teaching as a resource activity. Those faculty who are still seeking promotion talked about the value of recognition of their work, while faculty who were later in their careers were satisfied without recognition. Interestingly, faculty talked about a lack of team-based care or collaboration but also said they found support from their colleagues. Bill complained, “But it’s not a team service...there’s not any real productive interaction across those lines.” Even without a team approach to care, faculty

still felt supported: “I’ve never been in a situation where I had to switch a day, even on very short notice, and I didn’t get somebody to help me” (Violet, inpatient).

Neonatal Intensive Care Unit (NICU). The climate within the NICU was reported to be plagued by individualism and a monetary culture. The division is short several faculty members as faculty have left over the last few years and have not been replaced. Faculty have been asked to pick up extra patient care time without additional compensation. These factors have led to conflict between colleagues and a list of stressors that center around interpersonal demands.

The most frequently cited demand was difficulty getting buy-in and support from colleagues. Faculty were overworked and felt frustrated by office politics and an inability to challenge the status quo. Cheryl explained, “we need to do more. I mean, our division. We really need to do more, but I think, the incentives are not there, especially if you don’t have people are interested.” Abby added, “Everybody’s bitter. Everybody’s less willing to help.”

Additionally, the division is split into cliques that advocate for and support each other, but there was a dominant need to justify to colleagues that faculty were pulling their weight, most often by working long hours and making sure they were seen in the office each weekday, even if that meant working a 70-hour week. Abby said, “the fact that I worked 24 hours before and I’m not there a certain day, they see me as not there, as having time off. I don’t think any of us dropped below 60 [hours] in the last few months.”

Division leadership defined success based on patient numbers and financial standing, leaving faculty feeling unappreciated for the extra work they were doing:

If, once in a while, somebody would say – yeah, I really know you’re working hard, and I really appreciate what you do. That would be helpful. Instead of what we hear every single time from our leadership – oh, we’re paying you; you should not complain about your work hours. (Abby)

Faculty in this division were also the few that commented about low morale in multiple care settings.

Teaching was cited universally as a big resource for NICU faculty. Abby said of learners, “yeah, they make up for all the lows in between, but there’s a lot of lows in between.” Faculty also found support within their cliques and outside their division. Multiple faculty were working on national or regional projects (John, Cheryl) or talked about having backup plans for employment outside the university if the climate did not improve: “If it’s going to be really, really bad, I’m going to be out of here” (Abby).

Pediatric Intensive Care Unit (PICU). Though both NICU and PICU faculty cared for high acuity patients and the stressors of long hours and diminished faculty complements, the climate within the PICU division could not be more different than that of the NICU. The intensity of patient care was listed as both a demand and resource for PICU faculty, but faculty cherished their relationships with patients and families and helping them cope with difficult situations.

Though this was the largest division represented in this study, there was very little mention of interpersonal demands at all. Rather, faculty were frustrated with the uncertainty around the integration agreement with the hospital system and with the department having expectations without giving faculty the resources to meet them. Both these demands were centered around the academic roles of PICU faculty members: “We

are happy with each other. And, generally, happy with, like, the clinical work. But I think in the background of that is a lot of uncertainty about what's going to happen" (Dorothy, mid-career). University administration was another frequent source of frustration, as summarized by Chris, a late-career physician, "integrity is a big deal to me, and to be affiliated with an institution where integrity didn't mean a lot, both at the university administration level and with all the athletic stuff, has been really embarrassing and discouraging."

Discussion of colleagues was nearly universally positive. The biggest resource for the division was the division chief, who was described as fair, calm, flexible, and a good mentor.

I dread the day when [our division chief] decides she is going to leave the critical care division to be perfectly honest with you. My relationship with her has never felt like boss/employee. The person who's going to have to fill her shoes when she decides to step down as division chief is going to have a very challenging job because she's been phenomenal to work with. I don't always agree with every decision that she's made, but she has universally had the, what she perceives as the best interests of the division at heart in the decisions she's made. (Chris)

Leadership and colleagues recognize each other's personal and professional accomplishments, cover service time for a variety of needs, place high priority on family events, and spend time together socially. Fewer personal resources were discussed in this group because of this heavy reliance on colleagues for support. Dorothy added, "I've had other people in other divisions be like, 'Wow, you guys really like each other. That's so weird!' But we do."

Beyond tangible support and recognition, faculty also talk about their colleagues as collaborative and cohesive. Faculty felt a strong sense of belonging within the division and defended their peers to people outside the group:

And not just with other faculty members, but even with parents – we had a really difficult family recently, and they decided they didn't like certain faculty members and they would bad mouth those people, and every other person just worked to stand up for them (Frances).

Additional resources include learner growth and mentoring learners: “It's not actually the teaching of the medicine; it's more the influence and the empowerment of the learner that I find more engaging and more interesting” (Frances).

PICU faculty talked frequently about helping families deal with difficult outcomes. Tina explained:

So we walked his parents through that process and we helped them to make the right decisions, and we helped the grandmothers, two very active grandmothers, one of whom very much disagreed with the plan. We helped her to find peace and we helped him to continue his journey in a very peaceful way.

In many cases these relationships continued after the care ends: “There's one family that named their last child after me, they named him [name], that's his first name” (Denise, late career).

In both ICU divisions, faculty found ways to cope with the stress of caring for high acuity patients. However, the climates within each division affected these coping strategies. NICU faculty often looked to learners or outside their divisions for support when they felt that they were being unappreciated by leadership, their colleagues, and the

department. Faculty were not collaborative with projects because they felt overworked and unappreciated; they divided themselves into small cliques for support. The division climate was business-centered rather than person-centered. PICU faculty found tremendous support in each other and developed a culture of cohesive support to be a united front against outside forces they could not control. Some faculty in this division found their colleagues more supportive than family or friends and spent time with coworkers outside of work. Their division chief hired new faculty who would fit in with the culture rather than the candidate who might provide the most academic productivity. As with most academic faculty, mentoring learners and seeing them grow and progress in their training was seen as a resource.

Though it seems clear that the volume of job demands plus interpersonal demands would have produced consistently burned out faculty in the NICU division, only one faculty participant self-reported burn out (I would judge all three as having at least moderate emotional exhaustion +/- cynicism). PICU faculty defined themselves at points on the spectrum from feeling great to feeling a little burned out most days. So, while relationships with colleagues played an important role in driving or mitigating burnout, this was not the only salient factor and should be considered only one part of a holistic model.

Figure 3 illustrates differences in demands and resources as discussed by faculty in different practice settings and divisions. These demands and resources overlap with sub-themes listed in Figure 2 and further illustrate the lack of universality or consensus in interpreting characteristics and demands or resources.

Notably, faculty who practice in outpatient settings did not discuss common themes or sub-themes regarding resources, especially interpersonal resources. Practitioners in these settings spoke about conflict with colleagues, power differential in clinics, and that they may not see certain colleagues in a month or more due to erratic shifts. They also did not speak much about feeling valued or having variety in their job roles. On the other hand, they also did not complain about workload or barriers as much as they did about clerical and EHR duties as well as feeling insignificant.

Faculty who worked in mixed or inpatient settings reported more reliance on colleague support but also reported workload sub-themes as job demands. Though evidence of a connection between the two is not perfectly clear, it could be argued that more strenuous work hours and higher acuity patients create the need for an in-house support system.

Division Chiefs and Leaders. Interestingly, most division chiefs and leaders acknowledged at least some degree of burnout. Most did not have as much time in their work assignments dedicated to administrative time as they thought they should and were balancing patient care duties, academic duties, and leading a division or medical care unit.

Division chiefs and other leaders (medical directors) reported more administratively-focus demands than did other faculty members. These leaders found stress in the hospital system merger and making sure department leadership was approaching the deal with an academic mission in mind; some leaders reported difficulty communicating details of the agreement to their faculty when communication from department leadership was unclear. Uncertainty, mainly about the merger, was also a

common theme. Additionally, leaders were frustrated by the bureaucracy of trying to get initiatives passed and post job openings and felt like they had little power to enact change because decisions were held up by bureaucratic regulations. Matthew explained:

It's like a game board, and I think I understand how the game is played, and I think I understand how many pieces I have on the board and what moves I'm allowed to make, and I feel hemmed in, but I'm trying to figure out if there's actually more options that I've got.

Relative to the administrative demands, many leaders celebrated small victories for their divisions or units: "Just small victories like that make me feel useful" (Lindsay, a medical director).

Leaders relied heavily on family support and less heavily on their colleagues, probably due to their leadership roles. Many did tend to have close relationships to the department chair: "that's the one thing that's helpful is [the chair] and I go have breakfast once a month, go up to the café. I feel like he's available, at least to me he's available" (John, late-career).

Many faculty talked about dialing back their clinical time but spoke about the importance of keeping patient care as a sizable percentage of their work assignments; many leaders wanted to keep at least 25% of their work assignments as patient care time, depending upon the acuity of their patients and the hours that service time involved.

Dorothy stated:

I don't want a role that will take me away from the bedside because I think that, even though it's really hard, and I would love not to do night call, that is where I get my passion and my drive for the job.

Leaders felt the burden of progress inhibitors more than those who were not in leadership positions. Many leaders did not have what they felt was adequate administrative time, enhancing the problem service balance. They also felt the strain of hearing faculty complaints but having little power to make changes based on those complaints. Leaders did not talk about colleague support as much as non-leaders, likely because they do not confide in their direct reports about demands at the university or system level. For this group, family support played a larger role than colleague support for this reason.

Comparison by Burnout Level. As noted above, faculty had very different ways of describing their own burnout. Several faculty used other descriptors – bored, overworked, tired, accepting of the job – to describe their stress but then spoke about their work in a way that showed emotional exhaustion and depersonalization. Differences in demands and resources based on faculty members’ definitions of their own burnout, as filtered by the researcher, were noted and are reported here (see Table 6).

Academic medical faculty who self-reported at least some burnout tended to talk about demands like administration, bureaucracy, and trouble balancing their work assignments and catching up. On the other hand, faculty who reported not being burned out also reported values incongruence and having little power, but they focused on small victories and ways they could mitigate these stressors. These faculty reported feeling valued in their work.

Table 6

Demands and Resources by Self-Reported Burnout Level

<u>No Burnout</u>		<u>At Least Some Burnout</u>	
<u>Demands</u>	<u>Resources</u>	<u>Demands</u>	<u>Resources</u>
•Service balance (home)	•Family support	•Service balance (work)	•Patient care
•Values incongruence (success)	•Colleague support	•Hospital integration	•Family support
•Little power to change things	•Feeling valued	•University administration	•Colleague support
		•Bureaucracy	
		•Can't catch up	

Burned Out Faculty. Eight faculty members from across all practice settings described themselves at some level of burnout during at least one interview (36%). Five of these eight faculty were in leadership roles within the department. Four had substantial job duties outside their home department, mainly through contracts with larger entities. Five were male. Most were late career. These faculty worked in a variety of practice settings and divisions. Notably, the most common demands were not related to patient care or interpersonal demands. Rather, faculty discussed service balance (work), the hospital system merger, frustration with university administration, bureaucracy, and the inability to catch up on work as demands.

Faculty members who had difficulty catching up or completing the academic parts of their work assignments likely do not have the recovery time needed to prevent burnout. Thus, workload is a contributing factor to burnout as a function of balancing multiple areas of a work assignment, especially when there are not enough faculty to cover patient care without current faculty doing extra clinical time.

In this sample, barriers to productivity existed that were beyond the control of faculty or department leadership. These factors – university administration, bureaucracy,

and the hospital merger – created uncertainty and the feeling of a lack of power to make changes or decisions. Tangibly, these barriers prevented divisions from hiring necessary faculty and support personnel, required extra steps and time to get necessary documentation, and created a feeling of unease as faculty wondered whether their academic work assignments would be maintained after the integration agreement. Intangibly, morale was lowered and faculty often took out their frustrations on their colleagues.

About their own feelings of burnout, faculty said, “you stop caring about the impact of your words on your colleagues and coworkers, so you become a little bit less careful about how you communicate” (Chris, late-career). Nicholas, who is also late in his career and is in a leadership role, added:

You can do a lot of things for a short period of time and realize it’s hard, but when you don’t see an end coming or you’re not sure that the organization is going to actually solve the problem, then that’s where you can lead to morale issues that can erode the culture over time. (Nicholas, late-career)

Additionally, all burned out faculty asked for recognition of their work as a suggestion for improvement at the department level. Fred, who sees patients within the university and contracts with outside providers stated, “I guess I would think that there would be some value in being fully funded and having a \$1.2 million [state-funded] contract, but there’s been no acknowledgment of that from the department.”

Many burned out faculty talked about patient care as a resource because it was one of the few areas of their work assignments that was straightforward and not wrought with barriers: “I just want to see patients; I don’t even want to get involved in this other

stuff. I'm just going to put my head down and do my work and not worry about trying to make other things better" (McKenna).

Faculty in this group talked about colleague support and family support, indicating they do have support systems in place to help with job stressors. Chris, a pediatric intensive care physician, discussed colleague support and gratitude for being able to vent confidentially to coworkers: "some of the simple things are laughing and joking with my colleagues because they're not just coworkers, they're friends. I don't always appreciate that as much as I do, but when I think about it, that's hugely valuable."

Faculty in this group have support systems in place, indicating they are aware of the risks of burnout and are taking actions to stop or reduce it. The department has offered wellness activities including meditation at monthly faculty meetings (21/22 faculty interviewed don't like it). However, when stressors are at the system level and are typically out of the control of faculty, this data suggests that having personal coping mechanisms in place may not be enough to mitigate burnout.

Non-burned Out Faculty. Nine faculty denied burnout and reported feeling healthy or on the healthy end of the burnout spectrum (41%). Two of these faculty were filtered out by the researcher because they talked about interpersonal or job factors in a way that demonstrated high burnout scores on the MBI (EE + DP). These faculty tended to be within the first ten years of practice. Three of them served in leadership roles. All but one were female. As with burned out faculty, they represented a variety of practice settings and divisions.

The most common demand in this group was balancing service and home responsibilities. This sub-theme has been discussed previously in this chapter with

representative quotes for clarity. Additionally, faculty discussed differing definitions of success with the department or university as a job demand. Most interpreted the department/university to be focused on financial and academic productivity, while they focused more on relationships and patient satisfaction (business versus personal focus). Lindsay summarized this feeling:

If you think about the RVUs or how many patients am I seeing, we don't really get patient satisfaction surveys per se, which I would say I would feel more successful if my sick patients get better or my checkup kids stay healthy or people continue to ask for me at their next visit because they were happy with the care they got today.

Faculty in this group spoke about the frustration their chiefs and leaders faced in not having the power to make changes for their groups: "He's being...a mediator as best he can. He's kind of stuck," (Camille, hospital medicine) and sometimes felt that lack of power themselves in handling faculty complaints: "I'm just moving on because I've already stated this is not something I can control" (Lindsay, outpatient medicine).

Like their burned out colleagues, some faculty in this group talked about colleague support, but family support and intentional family time were universally appreciated. Also, faculty talked about feeling valued for their contributions: "There have been some discussions where I felt like they really needed my input. I mean they respected that I should be part of the discussion because I'm a clinician there" (Jane).

In this group, intangible values played a role in both the demands and resources lists. Faculty mentioned different definitions of success as a stressor but tended to be

sympathetic toward the constraints the department and university were under in being forced to value financial issues over individual ones.

Important similarities and differences existed between these groups that should be considered for further comparison. Both groups struggled with service balance, which has been established already as a strong driver of burnout. Faculty who self-reported burnout talked more about struggling to complete non-clinical duties while faculty who did not self-report burnout struggled more with balancing clinical and home responsibilities. Though this evidence is not conclusive, the connection could be made that personal demands and family stressors did not play an important role as burnout drivers in this population.

Second is the dichotomy between asking for recognition (burned out group) and feeling valued (not burned out group). Burned out faculty asked specifically for recognition of their accomplishments, contributions, or extra work effort; non-burned out faculty felt valued in their work. Self-reported burnout was not limited to a single division, role, or practice setting, showing that the differences in experiences themselves do not impact feeling valued. Rather, this value likely comes from disparate sources and is dependent on the nature of faculty work (i.e. value from patient encounters versus creating change in a position on a national committee versus meaningfulness of seeing learning growth) but has a consistent and strong buffering effect on demands. Clearly, feeling valued is not the sole contributor to burnout, or lack thereof, but it should be considered as a major theme. Figure 4 summarizes these findings.

Model Creation

In response to the demands and resources cited by academic medical faculty participants in this study, along with analysis of how those factors worked together in different groups of faculty, a model of the pathophysiology of burnout was created. Particular characteristics within each major theme are context-specific, but major themes are not specific to this group, and some transferability should be expected. More about how this model fits with the current literature and its transferability are discussed in Chapter 6. Themes are discussed in detail with representative quotes earlier in this chapter, so discussion in this section will be brief.

This model builds on earlier analysis by accounting for the interplay of factors. Figure 2 provided a list of personal, interpersonal, and job demands and resources and subsequent sub-themes. However, these sub-themes were interpreted contextually and were not consistent across groups, practice settings of job roles. These comparisons allowed for differentiation of characteristics and rearrangement into themes beyond demands and resources. Specific sub-themes within each theme in the model are unique to this study population, and specific interpretations of characteristics are unique to sub-populations or individuals. For example, an individual academic medical faculty member's experiences with tools for or barriers to productivity, interactions with colleagues, and perception of recognition provide a unique perspective on organization climate. As a demand, the data illustrate climate drives burnout, but as a resource, a positive climate mitigates other workplace stressors.

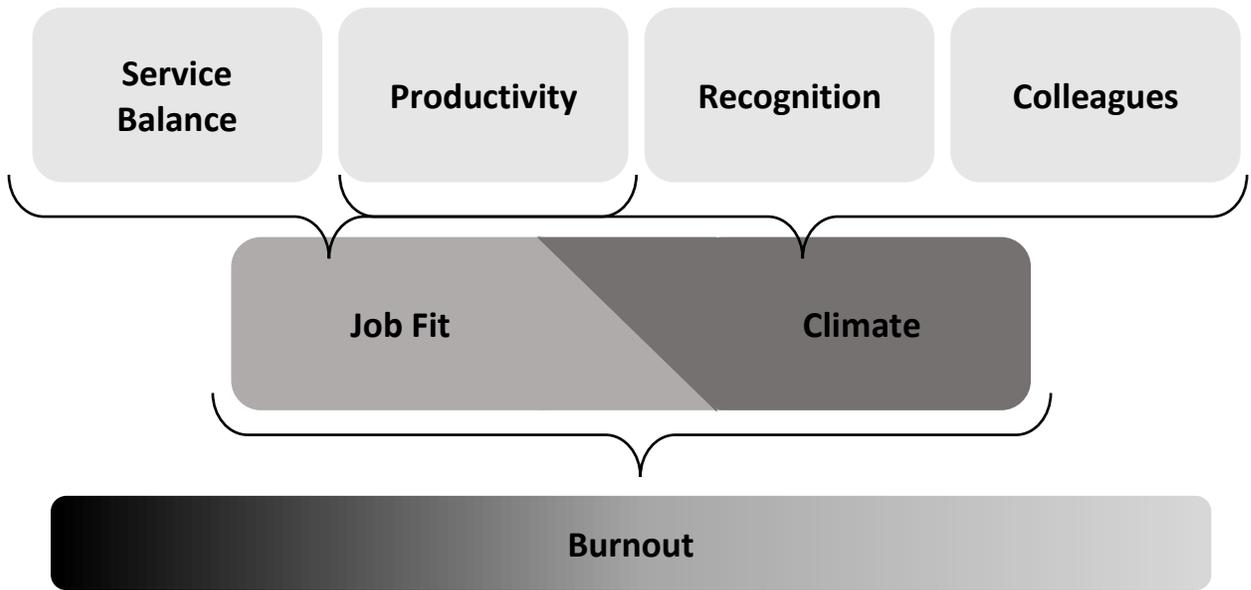


Figure 4. Model of burnout factors. This figure illustrates the interplay of major factors contributing to in this population.

Service Balance. Faculty in all groups talked about the difficulty of balancing patient care responsibilities with both work and home duties. In this population, many divisions did not have a full complement of faculty due to faculty leaving and not being replaced because of a hiring freeze. As a result, faculty were required to spend more time doing patient care duties than was written in their job descriptions. Because of this extra patient care time, faculty found it difficult to find time to complete academic responsibilities – teaching, especially at the medical school or outside locations; research; or administrative duties. Faculty often asked for protected time as a suggestion for improvement and were concerned about the impact integration with the hospital system might have on the academic portion of their work assignments. The academic portion of their work assignments is valued (resource), and threats against it create stress (demand).

Balancing family time was also a major demand for this population regardless of practice setting, division, or role. Faculty often took work home to complete after family time and their children went to bed. They felt guilty about missing family events or working on the weekends. Faculty reported conflict regarding work schedules and long hours. They also relied heavily on family support, again regardless of practice setting, division or role. Family time and support are highly valued resources but can also be sources of stress when conflict and missed time arise (demands).

Productivity. Tools for productivity – opportunities for career growth, support staff – allowed faculty to complete their jobs efficiently and effectively (resources). However, barriers to productivity were a major theme for driving burnout (demands). Faculty discussed bureaucracy, little power to change things, and university administration as barriers at levels out of their control. Lack of direction and turnover inhibited them from performing optimally and moving forward with clinical and non-clinical portions of their work assignments.

Barriers and tools for productivity affect job fit because they impact faculty members' abilities to complete non-clinical tasks; these academic functions were meaningful components of the academic clinician work assignment. Productivity also feeds into workplace climate because many barriers signal dysfunction rather than inherent parts of the work assignment. Because they are not part of the job description of an academic clinician, these barriers do not solely fit as elements of job fit but also as elements of organization climate.

Colleagues. Colleagues were a major driver toward or away from burnout, as discussed in detail above. Faculty reported demands like lack of buy-in, conflict, office

politics, and the need to justify to their colleagues that they were working hard. These characteristics were reported frequently in some divisions and never or rarely in others, indicating they were a strong driver of culture or climate. On the other hand, other divisions worked hard to create and maintain a collaborative, cohesive culture and climate; faculty in these divisions (mainly PICU) reported supportive colleagues that were coworkers and friends. A team-based approach to care was also defined as a resource by faculty. Of note, throughout the sample, faculty reported that their colleagues supported them in times of crisis or emergency (resource), even when other cultural categories and themes were stressors. Positive interactions with colleagues and having a culture of support (resources) mitigated burnout, while negative interactions and an unsupportive environment (demands) drove burnout.

Recognition. When reviewing significant statements by practice setting, division, and role, recognition appeared scattered throughout transcripts. However, once sub-themes were compared based on self-reported burnout level, differences in recognition and feeling valued became more apparent. Faculty who received recognition and other forms of feedback that made them feel valued self-reported occasional or no burnout. Faculty who did not feel valued were also the ones who reported some level of burnout. These faculty specifically asked for more recognition of their accomplishments, contributions, and extra work effort as ways the department or university could make them feel more supported.

Job Fit. When demands outweighed resources with regards to service balance and productivity, faculty complained of poor job fit: “I see myself keep doing what I am doing, and hopefully doing less clinical time, which is hard. It’s really hard, but it’s a

barrier to doing more things and being able to spend more time at home” (Jill, who has a child at home). Chris talked about the balance of busy service time and academic time that has been more flexible, indicating better job fit: “I think I have more flexibility now, in this role, than I would in other roles. It’s just that there are weeks that are inflexible and busy as hell, and weeks that are a lot more flexible.”

Job fit is defined by Shanafelt et al. (2009) as 10-20% of your work assignment doing your most valued job role. Many faculty in the department have had some freedom to customize their non-clinical time and work assignment percentages to fit their interests, within reason. However, these percentages may not be the actual amount of time dedicated to those duties since faculty are being pulled to cover patient care duties. Tina, a mid-career inpatient physician, explained, “what is on paper is sometimes different than what happens in reality. Which was really funny to me because [the department chair] seemed to think that those two things were the same, which is, would be nice.” Faculty talked about flexibility, variety of roles, and patient care as resources that affect job fit (resources); demands that negatively affected job fit were roles that were less meaningful (clerical work, EHR), service balance, and the intangible demands discussed above (demands).

Climate. Climate was driven by experiences with colleagues as well as the presence or absence of productivity resources. Divisions and practice settings with supportive collegial environments and strong direction from leadership tended to be less burned out than those without supportive collegial environments or with cultures that focused on numbers and finances. Climate was often moderated by division leadership, who pushed the division forward and focused on people (resources) or who did not spend

time making faculty feel valued or supported and focused more on the business side of clinical practice (demands).

Summary

This chapter investigated the interplay of personal, interpersonal, and job factors in impacting burnout in academic medical faculty. Demands and resources differed by practice setting, job role, division, and self-reported burnout level within faculty participants. These differences helped inform contexts in which certain demands or resources are more salient, a concept that has not been well-defined previously. Some demands and resources were consistent throughout the study population and were considered main themes or determinants.

Analyzing the ways these factors interplayed within different practice settings, division, and faculty roles aided in the creation of a model of the pathophysiology of burnout within this population. Themes within this model are not unique to this population, though the specific sub-themes and codes within them should be expected to be unique to each faculty population. Reliance on these major themes and drivers improves transferability of this model between academic faculty populations.

CHAPTER 6: CONCLUSIONS AND DISCUSSION

The purpose of this study was to understand the interplay of demands and resources that affect burnout and wellness in academic medical faculty at a large research university. Faculty were asked to define burnout and place themselves within that definition. In answering this research question, faculty defined characteristics of burnout that included typical stress-related terms – frustration, anxiety, being overwhelmed – but did not tend to reach the severity of burnout as defined by major scholars in the area. Faculty often used a spectrum or continuum to define burnout and describe its symptoms. Many placed themselves in the low-to-medium sections of this scale, which could indicate low to moderate levels of burnout but also could allow faculty to delay help-seeking because they do not self-identify as burned out.

The second research question asked faculty to interpret personal, interpersonal, and job characteristics as demands or resources, most of which appeared to contribute to burnout to at least some degree. The most common themes were job demands (service balance) and interpersonal resources (colleagues). Per the Job Demands-Resources Model (JD-R), these themes should balance each other and mitigate against burnout. However, that was not always the case, especially when demands were very high and/or relationships with colleagues were not always supportive. Job resources and interpersonal demands fell into similar categories as job demands and interpersonal resources,

indicating (a) that there was not a universal demand or resource, and (b) that some characteristics were interpreted as demands by some faculty and as resources by other faculty. Without a consistent list of demands and resources, a model of specific demands and resources and their contributions to the pathophysiology of burnout cannot be created; however, major themes arose from the data and are expected to transfer between units and organizations, thus leading to a model of themes rather than of specific characteristics.

This model postulates that job fit and climate are the two most salient factors in determining burnout. Job fit consists of characteristics like service balance (work or home), flexibility in academic duties, and job-specific progress inhibitors and other barriers to or tools for productivity (turnover, protected non-clinical time). Climate includes the sub-themes recognition, colleagues, and climate-specific barriers to or tools for productivity (bureaucracy, flexibility).

The Job Demands-Resources Model explains two ways in which demands and resources contribute to burnout. In the first, there is a persistent imbalance of demands over resources that does not allow individuals time to recover between stress events and leads to exhaustion (Demerouti et al., 2001), specifically emotional exhaustion. Alternatively are situations where resources are lacking, causing an imbalance in favor of demands and leading to withdrawal and disengagement (Demerouti et al., 2001), commonly defined as depersonalization or cynicism in burnout literature. This study used the JD-R to organize faculty's interpretation of personal, interpersonal, and job characteristics and outline major themes of demands and resources that are transferrable between organizations. A contextualized and detailed study of demands and resources in

a single department allowed specific areas of concentration to emerge. Current literature provides guidance for creating and implementing interventions to address some of these specific issues.

The following sections of this chapter compare study findings to existing theory and models of burnout, higher education theory regarding effective organizations, and prior research that used the JD-R. Interpretive phenomenological analysis (IPA) highlighted differences in individual and practice-based interpretations of characteristics. Four major themes of this study are outlined in relation to existing literature and recommended as action areas for this department moving forward. These areas – barriers to productivity, workload, and climate; collegial culture, leadership, and faculty support; recognition; and existing coping mechanisms are represented by the major themes in the proposed model of burnout and by sub-themes specific to this population. A more global discussion of the data makes additional inferences about the unique characteristics of academic medical faculty as a population. Implications of this research for theory, methodology in burnout research, and as a tool for industry professionals are described, followed by recommendations for future research.

Fit with Existing Models

The major themes discussed above are supported by existing literature and models of burnout and effective organizations. As a whole, the data confirm Maslach and Leiter's (2008) areas of work life theory about areas that contribute to burnout, but the main themes differ somewhat. Additionally, Gappa et al.'s (2007) model of effective higher education organizations provides a reasonable outline of specific areas for further attention as well. Data from this study is not congruent with previous JD-R studies.

Areas of Work Life. Table 3 in Chapter 2 provides a lengthy list of burnout drivers that appeared in medical literature. As a whole, this list includes characteristics in almost every facet of one's job as a potential cause of burnout. For the most part, the areas shown in Table 3 were represented in at least one interview, but many were not prevalent enough to be discussed as themes and did not appear relevant to burnout in this population. Data from this study fit Maslach and Leiter's (2008) areas of work life in the themes community, workload, and reward.

Community. Chronic, unresolved conflict can lead to burnout; positive, supportive relationships and a sense of belonging combat burnout; sense of community affects emotional exhaustion (Maslach & Leiter, 2008). This area was a major focus of this study and has appeared in the literature in other places as well (Pololi et al., 2009a). Though the connection between colleagues and burnout is not clear in this study, relationships with colleagues were the largest sub-theme of both interpersonal demands and interpersonal resources. Additional study in this area is recommended to further determine links between community and burnout in academic medical faculty. Collegiality and support are also recommended action areas.

Workload. Maslach and Leiter (2008) describe stressors in this area as a high-stress load without adequate time to recover, poor job fit, or emotionally-heavy work. Stress in this area affects emotional exhaustion. Academic medical faculty in this study talked about the emotional toll of their work (usually in the intensive care units) and the recovery time needed after a busy stretch on service. These topics were not consistent across all faculty and tended to be more common with inpatient faculty. Poor job fit, as a theme, was important to the faculty in this study, but faculty talked about job fit as a

demand because their extra clinical time did not leave much room to get to some of the more meaningful tasks. In medical literature on burnout, workload is typically defined as hours worked or number of call shifts. Generally, data from this study point to balancing clinical and non-clinical work rather than overall hours.

Reward. Maslach and Leiter (2008) describe this area as reward or recognition of efforts. Recognition obviously was important in this study population, but some faculty also talked about the balance of effort and reward as a value that would determine whether or not they would stay at the university or consider leaving. Recognition can be financial, institutional, or social. Recognition theory and practice are discussed in more detail later in this chapter.

Control. Maslach and Leiter (2008) consider control to encompass scheduling, job duties, resources, and the authority to do one's job. This area affects personal accomplishment, which is usually high in physicians as a result of their professional work (Kezar & Sam, 2011). However, this study population discussed a lack of control in all of these areas, and not having the authority to make meaningful changes was one of the top barriers to productivity that was discussed, especially among division chiefs and medical directors.

Values. Mismatch in basic values or principles can lead to burnout (Maslach & Leiter, 2008). In academic medicine, most university values include clinical care, social mission, medical education, and intellectual discovery (Pololi et al., 2009b). In the same study, faculty reported actions like betrayal of trust, lack of support for faculty, lack of support for medical education, and unethical behavior by senior faculty. Faculty in this study reported unethical behavior and stewardship by university leadership but also

talked about feeling distanced or completely separate from those entities because they were siloed on the medical campus and did not see or hear from leadership on a regular basis. Faculty reported intention to leave if these behaviors did not improve, but they did not seem to affect daily life for most faculty and, therefore, were not a major demand or resource. When values incongruence did appear as a theme with academic medical faculty, it was only in faculty who did not self-report or show signs of burnout, further limiting its applicability as a burnout driver in this population.

Fairness. Inequity in decision-making and compensation is determined to be a sign of disrespect and lower self-worth. This area affects both emotional exhaustion and depersonalization/cynicism and is thought to be the fulcrum between burnout and wellness (Maslach & Leiter, 2008). Faculty in this study did not directly address fairness at all in the data, but they did talk some about salaries that were not competitive and poor decision-making, both as functions of mismanaged leadership at the university level. This area was the least congruent with data from this study as it did not appear to drive burnout. Rather, recognition seemed to play the role of fulcrum between burnout and wellness.

The areas of work life model was not designed to be specific to medicine or higher education. Some themes – community, workload, recognition – were consistent with the themes found in this study’s model of burnout. Other characteristics – control, fairness, values congruence – fit into the main themes of climate and job fit, respectively, and might be more pertinent as sub-themes in other organizations. Regardless, fit with this existing model confirms the transferability of the proposed model.

Higher Education Theory. Several areas of discussion in these academic medical faculty interviews overlapped with existing higher education scholarship. Though intention to leave was not a major theme of this study, it has been an important research topic in medical and traditional academic literature, and burned out faculty are more likely to express intent to leave their organizations. Specifically in this dataset, faculty discussed the role of university administration as an indirect job demand – poor decision-making, past transgressions, and not seeing leadership from the main academic campus. Likewise, Smart (1990) reported that faculty influence in campus governance affected intention to leave. Though these characteristics were not strong drivers of burnout, the effects of campus governance on organizational satisfaction should be monitored.

Universally, collegial relationships were valued by faculty in medicine (Pololi et al., 2009a), liberal arts (Pifer et al., 2019), and management (Gersick et al., 2000). Collegial relationships in academic medical faculty were discussed in Chapter 2, but literature about liberal arts and management faculty found similar themes. Faculty reported important relationships with colleagues (51%) or colleagues and personal friends (46%) more often than with other individuals (Gersick, Bartunek, & Dutton, 2000). Pifer and colleagues (2019) reported that colleagues were a key factor of academic departments; though some overlap was reported, colleagues were typically discussed as either wholly positive or negative. Notably, the current study showed a high reliance on learners and patients/families as additional significant relationships that were overwhelmingly positive, confirming higher education literature but adding additional components.

In this study, division chiefs and the department chair played a strong role in creating and moderating culture. Division chiefs often set the tone for cultures that were judged positively or negatively on several characteristics, including leadership and relationships with colleagues. Tierney and Lanford (2018) explain that leaders set the culture through emphasizing the organization's mission, setting patterns for socialization of faculty, setting decision-making strategies, and recognizing formal and informal leaders. These themes were confirmed in part. Faculty discussed lack of clarity about what the department valued but also appreciated transparency of communication by leadership. Division and department leaders set drastically different socialization norms by running meetings that appreciated faculty (resource) or that focused on business (demand). Decision-making strategies and recognition of other leaders straddles the line between leadership and recognition.

Recognition and feeling valued are themes that have appeared throughout this paper. They also appear frequently in higher education scholarship. Kezar (2011) discusses power dynamics and the role of covert power struggles in not recognizing legitimacy of faculty issues and in bullying. More commonly, recognition is discussed as a driver for innovation and motivation. Tierney and Lanford (2016) discuss giving voice to diverse populations to help build intrinsic motivation and, thus, innovative strategies. The current study population often felt their opinions were stifled by more experienced leaders (Jane, Cheryl) and that barriers to productivity stood in the way of process improvement (McKenna). This data supports the findings of the current study.

Within individual characteristics, higher education literature broadly supports the findings of this study, though certain parameters are missing simply because of the

patient care element of academic medical faculty's job descriptions. Though this piece inherently will be missing from this body of literature, a useful model for successful organizations exists that ties many of these pieces together.

Gappa et al. (2007) presented a model for a successful organization as a function of faculty and administrative input. The "essential elements" of these workplaces align closely with current theory on burnout and the JD-R. Data from this study represents this model well and points out specific areas for improvement.

Respect. Gappa et al. (2007) define respect not as actions given by the organization but as a feeling felt by every faculty member. In this study, feeling valued and recognition seemed to run together in some instances. Faculty asked for more recognition from the department and found ways to feel valued outside the division and department when necessary. This element is largely missing from the studied organization and should be a subject of focus moving forward. Respect and recognition are discussed in more detail in Chapter 4 and later in this chapter.

Employment Equity. Faculty should receive fair treatment, tools to do their jobs, and have equal status (Gappa et al., 2007). Besides improving recognition, faculty in this study had mixed opinions on whether they had the resources they needed. Often the hospital provided resources for patient care, but fighting for protected time and compensation for extra clinical work were commonly discussed in the data. Many faculty felt the department could not focus on their individual needs because of the looming financial crisis at the university level. This element also runs parallel to the social and political recognition discussed later in this chapter.

Collegiality. Gappa et al. (2007) define collegiality as belonging to a community that values individuals. As discussed many times previously, this element was inconsistent across faculty in this study and is recommended as an area of focus because of its connection to other undesired outcomes like disengagement and turnover. In addition to respect and employment equity, collegiality should be an area of focus for this department.

Professional Growth. Professional growth includes opportunities to develop skills and knowledge as well as to address needs (Gappa et al., 2007). Faculty who had participated in department professional development – mainly a clinician-teacher program – talked about its value. Several faculty also spoke about opportunities for career growth within the department as a resource. I would argue that this element featured less prominently in the data because of the service balance constraints on faculty and not because of a lack of interest.

Academic Freedom/Autonomy. Gappa et al. (2007) recommend autonomy in research and publications, classroom activities, and as citizens of the university system. This was one area faculty reported as a resource. They appreciated flexibility in customizing the non-clinical parts of their work assignments to include teaching, research, or administration to align with their interests. Teaching and interacting with learners was also a resource for faculty.

Flexibility. Flexibility includes customizing work assignments and ways to find meaning in their work (Gappa et al., 2007). This element is closely related to the one above and is a strength of the department. Faculty found the most meaning through

teaching and patient care, especially when they had prolonged and significant interactions with patients and families.

Gappa et al. (2007) present essential elements of a successful organization as a combination of effort from faculty and the organization. Using their model as a guide, specific areas for improvement include respect, employment equity, collegiality, and possibly professional growth if concerns about service balance improve following the integration with the hospital system. Of note, the first 3 of these essential elements are related to institutional climate, which also makes up the larger share of the proposed model.

Job Demands-Resources Literature. The JD-R has been used in several industries worldwide, including academic medicine. Some overlap in themes exists between literature and this study, but there was less congruence than expected. Nonetheless, this framework was effective for organizing characteristics of this data set.

Demands reported in the literature regarding academic medicine include uncooperative colleagues, lack of compensation for teaching activities, lack of academic freedom, poorly implemented recognition programs, top-down approaches to leadership, and difficult learners (van den Berg et al., 2015). In this study, colleague conflict played a major role, as did recognition, but faculty almost universally appreciated time with learners and the teaching activities they were able to do. One important demand in this study that is missing from current literature is service balance (or any mention of workload) in academic medical faculty. This difference could be due to cultural differences between study populations; workload was a main demand in a multi-industry study (Demerouti et al., 2001).

Resources showed a similar level of overlap. Existing literature listed cooperative colleagues, time and support for faculty development, academic freedom, career opportunities, an active educational mission, and well-structured courses as resources for academic medical faculty. Faculty in the current study spoke infrequently, if at all, about faculty development, academic freedom, or course structure, but they did value career growth opportunities within their home organization. Again, some of these differences may be due to differing cultural norms in academic medicine between countries. Another study of higher education as a whole reported that burnout was mitigated by strong leadership, social support, feedback, and autonomy (Bakker et al., 2005), which aligns much more closely with the current study.

Though themes in this study did not confirm those found in other studies using the JD-R in medical education, it should still be considered a useful conceptual framework for organizing personal, interpersonal, and job characteristics. This study yielded a large amount of data, and the JD-R provided deductive coding themes in which to organize significant statements and begin the process of comparison and analyzing the interplay of these factors. Use of this framework also helped highlight the role of colleague relationships in this population and contrast the roles of job demands and interpersonal resources as salient themes.

Perhaps not surprisingly, results of this study align closely with existing theory about burnout. Maslach and Leiter's (2008) six areas of work life confirm themes from this data set reasonably well, with the exception of fairness and values, which, respectively were not discussed explicitly in the data or recognized as a strong demand. Themes of workload, community, and reward were also major themes for this data set;

faculty discussed some elements of control that were later incorporated into the theme, little power to change things, one of the barriers to productivity.

Higher education literature provided a model for an effective work environment (Gappa et al., 2007) that aligned closely with existing burnout theory and provided themes for further intervention. Faculty reported elements like academic freedom, autonomy, and flexibility as resources. The connections between the data and professional growth were less clear. Faculty appreciated options for professional growth but could not always take advantage of them due to service balance. The most obvious areas for improvement to meet the outline of this model are respect, employment equity, and collegiality so every academic medical faculty member feels valued as an equal member of a larger community.

Previous research using the JD-R was less closely related to the findings of this study. Part of this difference could be due to cultural differences; most JD-R studies were completed in the Netherlands. Nonetheless, the model provides a clear and concise outline for organizing faculty interpretations of personal, interpersonal, and job characteristics. The two main processes for demand imbalance relate strongly to this data: (a) a chronic imbalance of demands over resources overtaxes and exhausts faculty (barriers to productivity), or (b) a lack of resources prevent individual's from effectively meeting demands (collegiality, recognition).

Interpretive Phenomenological Analysis (IPA)

The value of qualitative methodologies in studying this topic have been discussed throughout this paper. Many of the nuances that appeared in this data analysis would not have been made clear through traditional quantitative methods – workload versus clinical

balance, public recognition versus social/political recognition, specifics of peer relationships.

IPA recommends a larger sample size than other qualitative methodologies. The amount of data that came from 44 faculty interviews (22 subjects x 2 interviews) was daunting at times, but this larger number of participants really was necessary to achieve saturation, specifically in a department with 200 faculty members in 24 divisions. In addition to saturation, comparing individual experiences, as recommended by IPA (Smith, 2004), brought to light cultural trends within specific divisions. Obvious differences between intensive care settings were noted, but even in divisions with two or three participants, comments about culture were remarkably aligned. Without IPA's guideline to focus on individual experiences, findings like these might have been lost. Patterns of demands and resources in sub-populations furthered the argument that a universal list of burnout drivers is not achievable due to the contextual nature of interpretation of demands and resources (Swensen, et al., 2016).

This finding opposes existing literature as summarized in Chapter 2 and the established research agenda for burnout research (Dyrbye et al., 2017). Scholars, especially those studying burnout in medical practitioners, tend to stay within a quantitative framework with a desire to create a single list of drivers and effective interventions. I would argue that the use of IPA in studying burnout in academic medical faculty more closely aligned with higher education literature and non-medical burnout research.

IPA recommends discussing findings in relation to existing literature (Smith, 2014). Themes and sub-themes matched relatively well with the drivers listed in Table 3

(Chapter 2), and analyzing the interplay of these factors aided in the creation of a transferrable model of the pathophysiology of burnout. The findings also fit with current higher education models for an effective organization (Gappa, et al., 2007), as discussed later in this chapter.

I would highly recommend interpretive phenomenological analysis for studying the nuances of burnout in academic medical faculty. Initially, I was concerned about the depth of data I would be able to gather, but two specific aspects of my position as an insider and a researcher may have been key in faculty feeling comfortable sharing their experiences. First, the order of interview questions encouraged faculty to disclose safe personal details (i.e. why they chose the specialty they did) before diving into more personal or confidential questions. Secondly, I understood the basic jargon of faculty life – rounding, promotion materials and procedures, names and roles in the department – as well as the history of the department and its relationships with people and organizations. Faculty shared confidential information and opinions they might not have with an outside researcher. Basically, my knowledge of the field and insider status yielded richer data than I might have gotten otherwise.

On the other hand, my proximity to this field also created blinders to some of the inherent characteristics of the field and demanded constant exercises in reading significant statements without bias. My positionality does not provide anchors for the standards, expectations, or views of physicians about their own profession. For example, the high-achieving, high-expectation nature of medicine is not always explicitly stated in the data but comes through as faculty describe their own values or assumptions about

department policies and procedures. These nuances could have been easily missed without extra diligence in analysis.

Action Areas

Themes and sub-themes were discussed in Chapters 4 and 5, which led to creation of a model of the pathophysiology of burnout in academic medical faculty. Though the individual sub-themes and categories within each major theme are specific to the study population, major themes should be expected to transfer between units or organizations based on their fit with current literature. Further discussion about the nuances of the most salient sub-themes follows, including relationships to codes that arose during open coding and tying them together with the current structure of the department and university.

Barriers to Productivity, Workload, and Climate. Barriers to productivity have been discussed heavily throughout earlier chapters of this paper. This section aims to connect barriers with other job demands and to qualify its reach as both a contributor to workload and to climate, although I would argue the tie to climate is stronger because these barriers are not inherent parts of the job of being an academic physician but rather are a function of a dysfunctional organization.

As a component of workload, progress inhibitors impact faculty members' ability to complete the non-clinical parts of their work assignments – teaching, research, administrative, and other duties. These components are difficult to balance with service time anyway, and when additional barriers make completion even harder, they inhibit motivation to innovate and improve programs and drive faculty toward burnout by removing meaning and the sense of accomplishment that accompanies completion of tasks. This persistent imbalance of demands over resources causes faculty to feel

overtaxed and exhausted, key components of how burnout is driven according to the Job Demands-Resources Model (Demerouti et al., 2001). As a result, faculty, like McKenna, an early-career subspecialist, would prefer to just see patients rather than trying to improve processes and face constant barriers. Because faculty spoke about these barriers as systems-level problems rather than inherent stressors of their jobs – like high acuity patients or EHR – barriers to productivity also reasonable fall within the theme of climate.

As an additional point of consideration, reported progress inhibitors that were division- or practice setting-specific tended to involve parts of the job that would reasonably have been outside faculty members' expectations of duties included in the role of an academic physician in a specific specialty. For example, faculty who worked in outpatient or mixed care settings cited service balance (home) as a common demand even though they had nannies and other systems in place to mitigate balance issues; their schedules typically consist of clinic days several days each week (~8:30am-5:00pm), and mixed setting faculty have weeks of service time occasionally as well (typically 5-7 consecutive 12-hour days). Frequently, days are extended by late patients, incomplete records, or other unexpected tasks. Outpatient faculty talked about the burden of electronic health records (EHR) (outpatient clinics use a notoriously difficult system that is different from the inpatient system), clerical work, and conflict around the power differential in their offices. These non-academic stressors are not inherently part of the job description and were likely not expected stressors when choosing these specialties.

Inpatient providers did not cite service balance (home) as frequently even though they have more service weeks per academic year and spend time writing notes and

working from home as do outpatient and mixed setting providers. They also take in-house night call and/or 24-hour phone call in addition to service weeks. Long and abnormal hours are part of the job and, therefore, an expected demand; these stressors were noted but were qualified as being expected characteristics of the role. Faculty looked forward to administrative weeks in between as recovery time. Rather, inpatient faculty were most concerned with barriers to their academic time; again, these barriers are not part of the job duties for inpatient academic physicians and would not have been expected stressors. I would argue the difference is that inpatient providers were aware of the non-typical hours and demands of service time in their specialties prior to choosing their jobs, whereas outpatient providers may have been less aware of barriers like power conflicts and clinic flow issues. In short, expectations about duties affected reactions to the same set of stressors.

More importantly, barriers to productivity were the most commonly cited reason faculty would consider leaving the department or the university. When discussed in this context, barriers were always those at levels beyond immediate leadership's control, typically at the university or hospital system level. Faculty were often willing to be patient and acknowledged that most organizations have ups and downs, but if no change to these barriers is noted in the next few years, some have made plans to leave and have specific backup plans in place.

Literature reports that burned out faculty, specifically those with high emotional exhaustion, are more likely to leave their institutions or reduce their work assignments (Sinsky et al., 2017; Windover et al., 2018). In this study, reports of barriers to productivity (through difficulties with service balance or through progress inhibitors) did

not necessarily correlate with burnout, they did correlate strongly with faculty intention to leave if barriers were not remedied. Because many of these barriers are beyond the control of a single unit, this theme is difficult to remedy or intervene against at the program or department level. Rather than removing these barriers, increasing resources to mitigate them would be a more effective strategy.

Collegial Culture, Leadership, and Faculty Support. Relationships with colleagues was the largest sub-theme within interpersonal demands and made up a large share of interpersonal resources also. Discussion around this theme was exceptionally dichotomous in nature and may represent a fulcrum in determining the balance of demands and resources in driving burnout. When comparing themes by division, a measurable difference between Neonatal Intensive Care Unit (NICU) and Pediatric Intensive Care Unit (PICU) faculty existed. NICU faculty talked about cliques, justifying their work to colleagues, office politics, individualism, and difficulty getting buy-in. To be fair, comments were made in these areas by at least one faculty in every division studied, but those comments were not the trend in most divisions. On the other hand, any comments from NICU faculty about support from colleagues – cohesiveness, collaboration, friendship, or teamwork – were discussed as wishful thinking or ways to improve. Alternatively, comments from PICU faculty heavily favored colleague support, and very few faculty spoke about negative relationships with colleagues outside of isolated incidents.

Comments from smaller divisions or those that were less represented in this study had more mixed results, although, some characteristics were reported very similarly among members of the same division. For example, faculty in one small division both

reported trouble getting buy-in from colleagues and individualism from their peers. In another division, both interviewed faculty talked about the burden of office politics. On the resources side, both members in a third division both talked about collaboration and teamwork among colleagues. Cultural traits were noted in multiple divisions, even those with few representatives in this study, indicating cultural themes are worth investigating further when planning intervention strategies.

As with barriers to productivity, relationships with colleagues do not represent a direct path to burnout, but plenty of literature about the relationship between social support and stress exists. This theme represents the second facet of the JD-R balance theory: too few resources are available to mitigate demands (Demerouti et al., 2001); when interpersonal resources are lacking, the toll of job demands is more taxing. In existing literature, faculty feared retaliation from colleagues and leaders for talking about stressors (Pololi et al., 2009a) or for taking leave for family reasons (Beckett et al., 2015). Negative work relationships have been shown to directly affect burnout (Schrijver et al., 2016). Halbesleben and Leon (2014) found that burnout can be contagious between colleagues. If burnout can be contagious, it should be assumed that a culture of individualism and cliques would also be contagious if not mitigated effectively.

In many cases, academic medical faculty in this study added that the culture of their divisions was set by division leadership. In this study population, the majority of faculty who made comments about colleague conflict as an interpersonal demand also made comments about division leadership as a job demand. For example, all faculty who talked about cliques also talked about a lack of understanding and a lack of guidance from division leadership. In some cases, faculty felt division leadership was not focusing

on the needs of faculty or pushing supportive, collaborative values, which can make a big difference in morale and burnout.

Social support has been shown to be a powerful mitigator of job demands, especially when combined with other resources like autonomy, feedback, and strong leadership (Bakker et al., 2005). Positive relationships act as a buffer against stressors, and collaboration with colleagues was reported as a protective factor (Pololi et al., 2009a). Time and time again in this data set, academic medical faculty whose division leadership pushed a culture of support and collaboration praised the efforts and the difference they have made on morale. Supportive colleagues were described as the largest sub-theme of interpersonal resources. Especially in an environment where barriers to productivity and other system-level workload issues cannot easily be mitigated at the unit level, colleague support should be an area of strong focus.

Finding Support Outside the Division. Even when the overall colleague culture was not supportive, faculty found ways to feel supported and valuable. In divisions where colleague conflict was high, many faculty found smaller groups to turn to for support. These smaller groups were often very close-knit. Faculty described them as confidants, friends that have seen them cry, and stable partners who pick them up when they're at their lowest.

Faculty also reported finding support and value from colleagues and organizations outside their divisions. In this study population, these relationships were reported from faculty in divisions with a less collaborative culture. Support came from colleagues at other universities or organizations (Fred), involvement in community engagement

working groups throughout the city (Cheryl), or participation in national task forces to solve problems specialty-wide (John).

If faculty are finding support and value regardless of their relationships with colleagues (as a whole) and the culture within their division, is there truly a need to address culture and collegiality? I would argue that culture is worth addressing for two reasons. First, if faculty are taking their work and ideas elsewhere, it limits their ability to address issues within the organization. The minimal time they have for non-clinical pursuits is being directed elsewhere, and results are not always feeding back to the university as collaborative projects with measurable outcomes. They are not engaging learners in their academic projects or educational activities, which one faculty member noted to be a reason trainees choose to go elsewhere after training or choose non-academic careers.

Second, a sense of belonging is connected to an intent to stay with an organization (Maslach & Leiter, 2008; Pololi et al., 2012; Wagner et al., 2015). Interactions with learners and patients/families carry weight for creating meaning in one's job, but they do not create the sense of belonging that motivates faculty to stay at their jobs. In fact, a large study reported that perceptions of hostile culture, including unrelatedness and disengagement, were the most commonly cited reasons faculty gave for intending to leave their jobs or academic medicine altogether (Pololi et al., 2012). So, although faculty in this study found support inside or outside their own divisions, a lack of belonging and engagement with their own coworkers can still lead to burnout and/or intention to leave their jobs.

Recognition. The department studied here has created additional opportunities over the past few years for public faculty recognition. Teaching awards are presented each year. Faculty meetings begin by highlighting recent accomplishments. When they were not receiving recognition, faculty asked for it specifically, even as a quick “thank you.” Unfortunately, this extended recognition practice is incongruent with contemporary recognition theory and is creating feelings of guilt and apathy rather than adding value.

Recognition scholars point out that our identities are formed, in part, by our interactions and dialogue with significant others (McQueen, n.d.). This point agrees with social constructivism, the interpretive framework for this study, which postulates that individuals construct subjective meaning about their environments through interactions with others (Creswell, 2013). These factors point more toward the importance of social and political recognition than receiving awards and public notoriety for accomplishments. In this view, being recognized means relaying “feelings of self-worth, self-respect, and self-esteem” through acknowledgement of individual value by significant others (McQueen, n.d.), not simply being presented with rewards.

Recognition in this form includes giving individuals a seat at the table and respecting their unique contributions. Denying individuals inclusion or value in decision-making processes threatens their perceived ability to contribute as an equal and respected member of a group (McQueen, n.d.). It may also preclude individuals from feeling a sense of engagement and belonging and cause them, through interactions with other excluded peers, to develop an image of the organization as unaccepting or even biased against certain groups of individuals.

In divisions with more negative opinions about group culture, this point was illustrated clearly. Jane, a newer faculty member, felt her opinion was not valued in division meetings, especially when longer-serving members of the division shot down her ideas immediately. Cheryl spoke about her frustrations trying to change the organization culture to recognize the importance of racial, ethnic, and gender diversity on campus.

In these instances, faculty experiences and opinions were not valued as valid suggestions or knowledge. This lack of recognition was not due to their own faults or shortcomings. Rather, scholars deem this exclusion as institutional subordination; Nancy Fraser explains that “some individuals and groups are denied the status of full partners in social interactions simply as a consequence of institutionalized patterns of cultural value” (Fraser & Honneth, 2003, p. 29) over which individual academic faculty members have no control.

Although asking for this type of recognition was not always overt as requests for recognition, it did come up in interviews. McKenna accused leadership of not understanding the value of her MBA, whereas John felt validated because he regularly had off-campus meetings with the department chair. Additionally, the feeling of having little power to change things also falls into the political recognition theme. Giving faculty titles and leadership roles without providing the tools, resources, and authority to lead effectively essentially takes away recognition of that individual as a capable and trustworthy leader.

All this to say, though faculty participants spoke about public recognition as an important part of feeling valued in their work, social and political recognition – giving each faculty member a voice and a venue in which to share the traits they value about

themselves – might be a more effective way to add value to the faculty experience. Currently, faculty in this department are encouraged to join committees and task forces as requirements for promotion, but are they then recognized as valuable members of those groups? Faculty are put into leadership roles, but are they entrusted with actual leadership decisions? Scholars point out that the solution to these problems of recognition lie in restructuring organizational values to get rid of old, preconceived values that lay the groundwork for inequities between individuals (McQueen, n.d.). Social and political recognition is a strongly recommended area for attention for this department.

Existing Coping Mechanisms. Because faculty are aware of the need for individual coping skills and are already practicing them relatively regularly, the need for these programs at the organization level is limited and is likely a place to cut costly intervention programs. All reported personal resources were coping mechanisms, and faculty discussed the importance of these activities and practices in mitigating burnout. Even though knowledge and practice are already in place, many organizational interventions to address burnout are individual-level interventions: mindfulness-based stress reduction workshops, meditation courses.

Individual-level interventions have been reported to be successful (Fortney et al., 2013; Lamothe et al., 2016; Schrijver et al., 2016). One explanation for the reported success of these individual-level interventions is performance bias. A systematic review of workplace interventions found a high incidence of this bias because (a) participant compliance with the interventions was not tracked reliably, and (b) the effects of contamination and co-interventions were not reported (Furlan et al., 2012). I would argue that the incidence of co-intervention was high in this study, as several faculty reported

starting new behaviors between the first and second interviews, including new hobbies (Abby, Jill, John, Matthew), taking extended vacations (Jill, Maureen), and setting new personal and job-related goals (Denise, Fred, Lindsay, McKenna) as a result of talking through stressors and focused resources. Not only do these new practices represent opportunities for contamination and co-intervention effects, they also further the argument that faculty have a strong grasp on their own coping mechanisms and probably do not need additional individual-level interventions activities from the organization.

As the literature explains, these interventions are but a bandage to lessen the effects of a broken system (Squiers et al., 2017). When they are viewed as another task to complete or box to check in their already busy lives, these types of interventions are even interpreted as demands (Callahan et al., 2018). Instead of addressing individual factors only, scholars typically recommend a multi-faceted approach that addresses interpersonal and system-level interventions as well (Schrijver, 2016; Squiers et al., 2017).

In this study population, the ability to fix the system is limited, but opportunities to build community and increase interpersonal resources are rampant. Small group debriefing sessions (West et al., 2014), formal mentoring programs (Chen et al., 2016; Schor et al., 2011), and learning communities (Wagner et al., 2015) have shown success in improving interpersonal relationships and feelings of belonging and less intention to leave.

Academic medical faculty at the study university focused on a few main themes during their interviews. Barriers to productivity, as a function of job fit and of climate, prevented them from completing non-clinical duties efficiently and effectively; this theme was made more prevalent by difficulty balancing service time with other

responsibilities. Relationships with colleagues were strongly divided and were the largest sub-theme of both interpersonal demands and interpersonal resources, depending mainly on faculty division. Some public recognition programs were present within the department and had been expanded to include additional faculty awards. Though these programs were mentioned as a resource, they were also a source of contention because faculty felt all their colleagues were working hard, not just those that received rewards. Rather, social and political recognition through meaningful positions on committees and tasks forces and valuing faculty experiences and non-medical qualifications should be a focus moving forward. Additionally, faculty had a strong awareness of the need for coping skills and ways to mitigate stress and incorporated these programs, none of which were university-sponsored, when they were able.

Global Evaluation

Stepping back from the research questions, additional themes emerged from the data that are worth further discussion, especially in studying a high-achieving population with unique job demands. As mentioned in Chapter 4, faculty defined burnout nearly synonymously with stress; does this lack of differentiation matter and does it warrant the use of a new term? The term “moral injury” has been used recently in the helping professions (Sugrue, 2019) as an alternative to burnout. Additionally, faculty talked about their perceptions of patient care as simple when compared to the non-clinical aspects of their jobs, mainly due to bureaucratic barriers to productivity. Finally, interpersonal characteristics included more social support than may have been expected from physicians; this need for social contact could be a function of the specialty studied or as a necessary mitigator for job demands.

Burnout Terminology. Burnout is a prolonged response to chronic stressors on the job and includes emotional exhaustion – feeling “overextended and depleted of one’s emotional and physical resources” – and depersonalization/cynicism – “negative, callous, excessively detached response” (Maslach & Leiter, 2008, p. 498). Depersonalization is often a coping response to chronic emotional exhaustion. Though faculty participants discussed some of these traits in their own definitions of burnout, more frequently they focused on short-term stressors like frustration, being tired at the end of a week on service, feeling overwhelmed.

Table 1 in Chapter 2 summarizes the overuse of the term “burnout” in literature and its position as a buzzword rather than a meaningful concept. Because of this overuse, its true meaning as a long-term response to stressors may have become synonymous with stressors at work. Faculty participants’ discussion of burnout as a short-term or transient feeling confirms this claim.

Recently, popular science has begun to transfer the term “moral injury” from military veterans to physicians. These sources claim that the term burnout shames physicians by conveying a victim mindset and recommend moral injury as more fitting term for physician distress (ZDogMD, 2019). Moral injury occurs when a situation causes moral dissonance and results in an individual doing or witnessing an action that goes against their own moral values (Sugrue, 2019). Data from this study convey reactions in dealing with difficult patients and families as well as coping with unfavorable patient outcomes; these activities likely create moral dissonance that could be a precursor to moral injury. ZDogMD’s vlog post, though not scholarly in nature, received 23,300 shares within seven days of being posted as a diatribe against the term

burnout as one that shames physicians by telling them they are not resilient enough to handle the demands of the job. The author summarizes that many physicians “feel overwhelmed, demoralized, exhausted, cynical, afraid, and alone.”

These terms both (a) match the terminology used by academic medical faculty in this study to define burnout, and (b) use terminology in the standard definition of burnout to describe the characteristics of moral injury. I would argue that the bigger issue is not the specific term used to describe faculty experiences but rather is the focus on shaming faculty as victims of their own lack of resilience. Yet departments and universities continue to provide individual-level interventions (i.e. yoga classes) to help faculty build their resilience. Data from this study indicate that faculty have individual coping mechanisms in place and understand the importance of those practices in mitigating job stressors. Thus, universities are perpetuating this victim mindset. In reality, physicians’ downplay of burnout as a serious condition could be an attempt to downplay their own status as victims. Rather than admit to being burned out and unable to manage their own resilience, faculty attempt to maintain unrealistic expectations for themselves.

Unrealistic Expectations. Academic medical faculty discussed sub-themes of unrealistic expectations and expectations without resources from leadership. Often, these topics applied to non-clinical job duties, mainly academic productivity around research and teaching. This construct of not meeting expectations appears in multiple themes and sub-themes throughout the data:

- Inadequate performance as a physical symptom of burnout
- Perfectionism as a personal demand that led to unrealistic expectations of self
- Statements that their divisions needed to be more academically productive

- Concern that department leadership was focusing on university-level issues rather than on individual faculty needs
- Acceptance of work overflowing into personal time (evenings, weekends)

Leadership in this department have taken measures over the last several years to lessen the burden of academic productivity on faculty members. Scholarly activity for promotion is defined more broadly than presentations and publications and includes new curriculum, leadership roles in training programs and rotations, and implementing new practices at the clinical level. Communication about the progress of the integration agreement and future expectations has been clearer and more frequent; the acting chair regularly updates faculty at monthly faculty meetings about new developments or changes. In short, the perception of unrealistic expectations is not likely being delivered from department leadership; faculty also reported a strong disconnect with the main academic campus at this university, so expectations are not likely coming from there either.

Rather, I would argue that academic medical faculty struggle with dissonance between their ideals about physician duties versus the reality of the position. Lindsay, an early-career outpatient physician, explained:

You hear all these, every old physician, there's this cliché story of this old person that's so happy with their life because they hang their white coat up when they leave the office, and that's synonymous with 'now I'm done with doctoring and I'm going to go home and be a parent or have a life.' And it's not that; that's not what happens. That's not real life.

Most faculty chose academic medicine because of the combination of patient care and teaching; some also appreciated opportunities for research and community engagement. However, faculty in this population had trouble balancing clinical and non-clinical duties to the extent that service balance was a major theme within this data set. Processes have been put in place by leadership to lessen the burden of academic productivity, but these non-clinical duties remain meaningful parts of the work assignment that are not being fulfilled to faculty's own expectations.

Not being able to meet their own high expectations by contributing meaningfully to the values of an academic medical institution - clinical care, social mission, medical education, and intellectual discovery (Pololi, et al., 2009b) – is likely enough to spark moral dissonance and the resulting moral injury proposed above. In fact, moral distress due to compromised values was one of the most cited aspects of culture for faculty who intended to leave their institutions or academic medicine (Pololi, et al., 2012). Faculty most often engaged with patient care values of their organizations even when they had trouble engaging with other values (Pololi, et al., 2009b).

Simplicity of Patient Care. As a reaction to progress inhibitors like bureaucratic processes or feeling they had little power to change things, faculty in this study talked about the simplicity of patient care as the easiest part of their jobs. Many of these faculty take care of the sickest patients in the hospital system but said that care came without all the barriers that non-clinical duties often had. In some ways, this speaks to the depth of frustration faculty felt as a result of barriers to non-clinical productivity with or without having to balance these duties with patient care.

Alternatively, an appreciation for patient care could be a function of the reward of professional practice. Academic medical faculty occupy a niche that is unique from traditional university faculty in that their professional practice leads to meaningfulness from fulfilling their professional duties (Kezar & Sam, 2011). Interactions with patients and families were cited by participants in this study as a key point of meaningfulness, especially from inpatient faculty who have time to get to know these groups better than outpatient faculty.

Social Nature of the Specialty. Forming close relationships with patients and their families was one meaningful aspect of academic medical faculty members' jobs. They also relied heavily on social support from their colleagues, to the extent that the dichotomy between a cohesive, collaborative culture and an individualistic, clique-driven culture warranted its own comparison in Chapter 5. The specialty studied here is one that is known, colloquially, for being "nicer" than some other specialties. Stereotypically, physicians are not regarded as highly-social in their medical practice. Though this connection does not appear in the data, it should be noted in future research that the focus on social relationships presented in the data may not transfer directly to other groups of physicians.

The above evaluation represents findings that were noted in the data but that were not defined by the research questions. In intervening with burnout in academic medical faculty, it should be noted that the term "burnout" has become overused and diluted to the point that it is synonymous with stress among many faculty members. More important is the role of self-imposed high standards and expectations; in this case, these expectations were present even when leadership had made an effort to lessen them. Due to frustration

from their lack of ability to meet self-imposed expectations as well as meaning found in interactions with patients and their families, faculty discussed the simplicity of patient care as a job duty, even though this care involves some of the sickest patients in the health system.

Implications

Theory. Data in this study align with several related disciplines and can be used to inform future research in those areas. Higher education literature discusses service balance, although it is discussed as teaching versus research time (O'Meara & Bloomgarden, 2011) rather than clinical versus academic time. Power struggles and control played a small role in this study and in traditional academic faculty (Kezar, 2011). The role of leaders, colleagues, and culture made up a large portion of the data in this study and illustrated the importance of these factors in determining stress and burnout. Higher education literature has linked these attributes to positive and negative experiences as well (Pifer et al, 2019; O'Meara & Braskamp, 2005; Smart, 1990; Tierney & Lanford, 2016; Tierney & Lanford, 2018). Most of the data from the current study supports this body of higher education literature, but the patient care aspect of academic medical faculty's jobs creates additional areas of stress and reward.

In regard to current burnout theory, this data confirms the role of characteristics like workload and relationships with colleagues as important drivers of burnout. The main themes in this model (see Figure 4 in Chapter 5) align closely with existing theory and models (Gappa et al., 2007; Maslach & Leiter, 2008). These themes also align with some of the drivers of burnout listed in Table 3 (Chapter 2), but all drivers listed did not become themes in the current study.

In short, this project created a narrowed, contextualized list of burnout drivers specific to this department that fit into a larger model of transferrable themes. For example, academic medical faculty in any organization have to balance clinical and non-clinical duties, but the nuances of that balance will differ between units and organizations to determine specific characteristics that contribute to job fit as a demand or a resource. Demerouti et al. (2001) outline the ways demands and resources balance each other to impact burnout. Both an excess of demands (workload, barriers to productivity) as well as a shortage of resources (unsupportive culture, climate, colleagues) were present in this data.

Literature on burnout in physicians pushes the thought that personal factors play a role in burnout but concedes that the exact role is not yet understood (Eckleberry-Hunt et al., 2017). This study specifically asked about personal demands and resources and concluded that personal demands were not a significant driver of burnout, refuting current theory. Personal demands – personality traits, reactions to work – were well defined but not impactful as more than minor stressors. Personal coping mechanisms played a role in mitigating burnout stressors, and the data indicated faculty understood the importance of these practices for that purpose.

Although JD-R was a useful tool for organizing themes and sub-themes of data, this study does not confirm the themes found in previous research with academic medical faculty. Themes here were less learner-centered and more focused on a wider array of job characteristics – leadership, university and systems characteristics, values. Cultural differences or interview questions could have accounted for this difference, as there was overlap regarding the themes colleagues and recognition.

Academic Medical Faculty. This data has important practical significance also. Many of the drivers of burnout are job demands, but faculty should take responsibility to improve interpersonal relationships and personal resources to help combat the demands that cannot easily be changed. First, academic medical faculty should be encouraged to create explicit support systems. Data from this study shows support systems comprised of colleagues, family, and friends. Having these resources firmly in place for times when stress is high removes barriers to seeking help and support. Regular contact with supportive groups or individuals also creates an extra checkpoint so faculty cannot easily hide in the burnout spectrum gray area discussed earlier.

Besides fortifying support systems, faculty should take an active role in both recognition and collegiality action areas. Faculty can recognize colleagues' expertise and interest in niche practice or research areas through encouragement and by using their colleagues as resources for their own projects and ideas. Many faculty mentor resident, fellow, and student projects; faculty can play a role in helping learners find the best mentors for their projects by learning about their colleagues' interests. Additionally, there was some evidence of incivility, individualism, and cliques in the data; even if these actions are modeled by division leadership, individual faculty members can take responsibility for changing collegiality culture within their divisions through acts of recognition and support.

Leaders in Academic Medicine. Academic medical faculty had very different opinions about division and department leadership. Supportive, engaged leaders led productive divisions that were supportive of each other. Other leaders were business-focused and did not take the time to recognize contributions or engage faculty members.

O'Meara and Braskamp (2005) suggest several areas to help promote faculty growth. The first, which the department has already done, is to broaden the criteria for promotion to include scholarly activity other than presentations and publications. In line with this suggestion are creating flexible workloads to stress longer-term projects rather than those that can be completed in one academic year or less, as well as rewarding mentorship, advising, and community engagement.

Department leadership has shown interest in the main themes from the study to develop a plan for moving forward. In addition to education about promotion criteria, communication about departmental measures of success and about the organization's mission should be a priority. Tierney and Lanford (2018) discuss mission, information, strategy, and leadership as key components for understanding an organization's culture; more emphasis should be placed on these areas.

With regards to intervention, I recommend putting resources toward building community and increasing interpersonal resources rather than promoting individual-level interventions like meditation or tai chi. Literature around community building, engagement, and belongingness (Chen et al., 2016; Pololi et al., 2015; Schor et al., 2011; Wagner et al., 2015) can be used as guide for implementing mentoring programs, learning communities, and other related interventions. Additionally, leaders should adopt traits of leadership styles that are engaging and transformational (Breevart et al., 2014; Schaufeli, 2015) and that remove barriers and treat faculty as partners (Swensen et al., 2016). The annual review process should also be used as a brainstorming session and an area for faculty to provide constructive feedback in a safe space (Shanafelt & Swensen, 2017).

Recommendations for Future Research

JD-R scholars recommend a two-step approach to using this model for research. The first step is to conduct qualitative interviews; the second step is to use that interview data to construct a survey for the entire faculty (Bakker & Demerouti, 2007). This process could be carried out in the study department to confirm or refute some of the division, practice setting, and role comparisons that were postulated by this study. These results noted significant differences in climate between divisions; further study about these differences and their causes and effects could lead to more effective social change and building a more positive climate.

As with any study of this nature, additional work at other organizations or in other departments is necessary to validate the model created in this paper. It is expected that the major themes would transfer, but additional comparison of sub-themes and other details would improve the construct and internal validity of this model. In relation to the published research agenda discussed in Chapter 2 (Dyrbye et al., 2017), this study does not further the research goals as published, mainly due to the quantitative nature of the goals not matching the purpose of this study or the outcomes of this qualitative methodology. Their agenda focuses on common metrics and generalizable data rather than the nuanced data presented here. Although this work does not set forth a specific framework for interventions, it does provide evidence for the value of organization- or department-specific approaches to intervention rather than a one size fits all approach.

More broadly, this study addresses research in related fields as well. Though Maslach and Leiter (2008) focused on six areas of work life that contribute to burnout, this data pointed mainly to workload, community, and reward as drivers or mitigators of

burnout. Additionally, portions of Gappa and colleagues' (2007) proposed model for higher education institutions were confirmed – employment equity, respect, and collegiality. Consistently, themes regarding colleagues, climate, and culture were discussed, indicating these are the most salient characteristics for further study.

Recognition played a unique role within this study population; public recognition had been expanded within the department, but these efforts were unappreciated or linked to feelings of guilt in some academic medical faculty. The hospital system also presents multiple rounds of awards to physicians, nurses, and other practitioners throughout the year. The impact of public recognition versus more appropriate forms of recognition – social, political – presents an area of study that is missing in the medical literature. In this study, faculty linked less public recognition (i.e. someone saying “thank you”) to feeling valued, a characteristic that appeared to represent the fulcrum between happy and unhappy faculty. More appropriately recognizing faculty members may affect their feelings of value and belongingness.

Relationships with others – leadership, colleagues, learners, patients, and families – played a key role in this study. This data pointed to relationships with colleagues, learners, and patients/families as most salient with academic medical faculty. However, higher education scholars found more emphasis placed on relationships with colleagues and leadership among liberal arts faculty (Pifer et al., 2019). Whether this disagreement was due to specific departmental characteristics of this study population or to differences between traditional academic faculty and academic medical faculty has not been determined.

Summary

Sub-themes in this data set are unique to this study population, but they fit within a larger set of themes that is transferrable between organizations. These themes, and the resulting model of the pathophysiology of burnout, fit relatively closely with the main themes of current burnout literature and higher education models for successful organizations. However, themes differed more significantly from those in existing JD-R literature. Nonetheless, the JD-R model was appropriate for this study as an organizer for personal, interpersonal, and job characteristics. Four action areas - barriers, workload, and climate; collegial culture, leadership, and faculty support; recognition; and existing coping mechanisms – were identified and compared to the literature to determine appropriately-target action areas.

This study methodology is drastically different from the quantitative work that is published in the field of physician burnout. As a way of narrowing intervention strategies, increasing effectiveness, and preventing spending money on ineffective interventions, it identified nuances of major themes rather than adding to an existing, exhaustive list of burnout drivers. Future actions in this department should focus on the major identified themes. Replicative or similar studies in other organizations would further the reach of this model and validate the value of qualitative research in understanding and mitigating burnout.

REFERENCES

- Angen, M. J. (2000). Evaluating interpretive inquiry: Reviewing the validity debate and opening the dialogue. *Qualitative Health Research, 10*(3), 378–395.
<http://doi.org/10.1177/104973230001000308>
- Bakker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008). Work engagement: An emerging concept in occupational health psychology. *Work & Stress, 22*(3), 187–200. <http://doi.org/10.1080/02678370802393649>
- Bakker, A., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Management Psychology, 22*(3), 309–328.
<http://dx.doi.org/10.1108/02683940710733115>
- Bakker, A., Demerouti, E., & Euwema, M. (2005). Job resources buffer the impact of demands on burnout. *Journal of Occupational Health Psychology, 10*(2), 170–180.
<http://doi.org/10.1037/1076-8998.10.2.170>
- Bazargan, M., Makar, M., Bazargan-hejazi, S., Ani, C., & Wolf, K. E. (2009). Preventive, lifestyle, and personal health behaviors among physicians methods. *Academic Psychiatry, 33*(4), 298–295. doi: 10.1176/appi.ap.33.4.289
- Beckett, L., Nettiksimmons, J., Howell, L. P., & Villablanca, A. C. (2015). Do family responsibilities and a clinical versus research faculty position affect satisfaction with career and work–life balance for medical school faculty? *Journal of Women's Health, 24*(6), 471–480. <http://doi.org/10.1089/jwh.2014.4858>

- Berwick, D., Nolan, T., & Whittington, J. (2008). The Triple Aim: Care, health, and cost. *Health Affairs (Millwood)*, 27(3), 759–769. <https://doi.org/10.1377/hlthaff.27.3.759>
- Bodenheimer, T., & Sinsky, C. (2014). From triple to quadruple aim: Care of the patient requires care of the provider. *Annals of Family Medicine*, 12(6), 573–576. <http://doi.org/10.1370/afm.1713>
- Breevaart, K., Bakker, A., Hetland, J., & Hetland, H. (2014). The influence of constructive and destructive leadership behaviors on follower burnout. In M. Leiter, A. Bakker, & C. Maslach (Eds.), *Burnout at work: A psychological perspective* (pp. 102–121). New York, NY: Psychology Press.
- Callahan, K., Christman, G., & Maltby, L. (2018). Battling burnout: strategies for promoting physician wellness. *Advances in Pediatrics*, 65, 1–17. <http://doi.org/10.1016/j.yapd.2018.03.001>
- Chen, M., Sandborg, C., Hudgins, L., Sanford, R., & Backrach, L. (2016). A multifaceted mentoring program for junior faculty in academic pediatrics. *Teaching and Learning in Medicine*, 28(3), 320–328. <http://doi.org/10.1080/10401334.2016.1153476>
- Cherniss, C., Egnatios, E., Wacker, S., & O’Dowd, B. (1981). The professional mystique and burnout in public sector professionals. In *Social Policy*. New York, NY: Praeger.
- Chrousos, G. P. (2009). Stress and disorders of the stress system. *Nature Reviews, Endocrinology*, 5(7), 374–81. <http://doi.org/10.1038/nrendo.2009.106>
- Creswell, J. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (3rd ed.). Thousand Oaks, CA: Sage.
- Davis, B., Hill, S., Fisher, P., Nick, T., & Ward, W. (2015). Faculty burnout in a large

- department of pediatrics. *Journal of Hospital Administration*, 4(2), 74–77.
<https://doi.org/10.5430/jha.v4n2p74>
- Day, A., & Leiter, M. (2014). The good and bad of working relationships. In M. Leiter, A. Bakker, & C. Maslach (Eds.), *Burnout at work: A psychological perspective* (pp. 56–79). New York, NY: Psychology Press.
- Demerouti, E., Bakker, A., Nechreiner, F., & Schaufeli, W. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3), 499–512.
<http://dx.doi.org/10.1037/0021-9010.86.3.499>
- Dyrbye, L. N., West, C. P., Satele, D., Boone, S., Tan, L., Sloan, J., & Shanafelt, T. D. (2014). Burnout among U.S. medical students, residents, and early career physicians relative to the general U.S. population. *Academic Medicine*, 89(3), 443–51.
<http://doi.org/10.1097/ACM.000000000000134>
- Dyrbye, L. N., West, C. P., Satele, D., Sloan, J. A., & Shanafelt, T. D. (2011). Work/home conflict and burnout among academic internal medicine physicians. *Archives of Internal Medicine*, 171(13), 1207–1209.
<https://doi.org/10.1001/archinternmed.2011.289>
- Dyrbye, L., & Shanafelt, T. (2016). A narrative review on burnout experienced by medical students and residents. *Medical Education*, 50(1).
<http://doi.org/10.1111/medu.12927>
- Dyrbye, L., Trockel, M., Frank, E., Olson, K., Linzer, M., Lemaire, J., ... Sinsky, C. (2017). Development of a research agenda to identify evidence-based strategies to improve physician wellness and reduce burnout. *Annals of Internal Medicine*, 166(10), 743–745. <https://doi.org/10.7326/M16-2956>

- Eckleberry-Hunt, J., Kirkpatrick, H., & Barbera, T. (2018). The problems with burnout research. *Academic Medicine*, *93*(3), 367–370.
<http://doi.org/10.1097/ACM.0000000000001890>
- Eckleberry-Hunt, J., Kirkpatrick, H., & Hunt, K. (2017). Physician burnout and wellness. In K. Brower & M. Riba (Eds.), *Physician Mental Health and Well-Being* (pp. 3–32). New York, NY: Springer.
- Eckleberry-Hunt, J., Lick, D., Boura, J., Hunt, R., Balasubramaniam, M., Mulhem, E., & Fisher, C. (2009). An exploratory study of resident burnout and wellness. *Academic Medicine*, *84*(2), 269–277. <http://doi.org/10.1097/ACM.0b013e3181938a45>
- Forbes, D. (2011). Toward a unified model of human motivation. *Review of General Psychology*, *15*(2), 85–98.
- Fortney, L., Luchterhand, C., Zakletskaia, L., Zgierska, A., & Rakel, D. (2013). Abbreviated mindfulness intervention for job satisfaction, quality of life, and compassion in primary care clinicians: A pilot study. *Annals of Family Medicine*, *11*(5), 412–420. <http://doi.org/10.1370/afm.1511>
- Fraser, N., & Honneth, A. (2003). *Redistribution or recognition: A political-philosophical exchange*. London, UK: Verso.
- French, J., & Kahn R. (1962). A programmatic approach to studying the industrial environment and mental health. *Journal of Social Issues*, *18*(3), 1-47.
<http://dx.doi.org/10.1111/j.1540-4560.1962.tb00415.x>
- Freudenberger, H. J. (1974). Staff burn-out. *Journal of Social Issues*, *30*(1), 159–165.
<http://doi.org/10.1111/j.1540-4560.1974.tb00706.x>
- Furlan, A. D., Gnam, W. H., Carnide, N., Irvin, E., Amick, B. C., DeRango, K., ...

- Bültmann, U. (2012). Systematic review of intervention practices for depression in the workplace. *Journal of Occupational Rehabilitation, 22*(3), 312–321.
<http://doi.org/10.1007/s10926-011-9340-2>
- Gappa, J., Austin, A., & Trice, A. (2007). *Rethinking faculty work: Higher education's strategic imperative*. San Francisco, CA: Jossey-Bass.
- Gersick, C. J. G., Bartunek, J. M., & Dutton, J. E. (2000). Learning from academia: The importance of relationships in professional life. *Academic of Management Journal, 43*(6), 1026-1044. Retrieved from <https://www.jstor.org/stable/1556333>
- Gerstner, L.V. (2003). *Who says elephants can't dance?* New York, NY: Harper Collins.
- Glasheen, J. J., Misky, G. J., Reid, M. B., Harrison, R. A., Sharpe, B., Auerbach, A., ... Shanafelt, T.D. (2011). Career satisfaction and burnout in academic hospital medicine. *Archives of Internal Medicine, 171*(8), 782.
<http://doi.org/10.1001/archinternmed.2011.153>
- Glesne, C. (2016). *Becoming qualitative researchers: An introduction* (5th ed.). Boston: Pearson.
- Halbesleben, J., & Leon, M. (2014). Multilevel models of burnout: Separating group level and individual level effects in burnout research. In M. Leiter, A. Bakker, & C. Maslach (Eds.), *Burnout at work: A psychological perspective* (pp. 122–144). New York, NY: Psychology Press.
- Hoffarth, M. J. (2017). The making of burnout: From social change to self-awareness in the postwar United States, 1970-1982. *History of the Human Sciences, 30*(5), 30–45.
<http://doi.org/10.1177/0952695117724929>
- Hu, Y., Fix, M., & Hevelone, N. (2012). Physicians' needs in coping with emotional

- stressors: the case for peer support. *Archives of Surgery*, 147(3), 212–217.
<http://doi.org/10.1001/archsurg.2011.312>
- Hurrell, J. J., Nelson, D. L., & Simmons, B. L. (1998). Measuring job stressors and strains : Where we have been, where we are, and where we need to go. *Journal of Occupational Health Psychology*, 3(4), 368–389. <http://dx.doi.org/10.1037/1076-8998.3.4.368>
- Husserl, E. (1913). *Ideas*. London: George Allen and Unwin. Republished 1962, New York, NY: Collier.
- Juster, R. P., Sindi, S., Marin, M. F., Perna, A., Hashemi, A., Pruessner, J. C., & Lupien, S. J. (2011). A clinical allostatic load index is associated with burnout symptoms and hypocortisolemic profiles in healthy workers. *Psychoneuroendocrinology*, 36(6), 797–805. <http://doi.org/10.1016/j.psyneuen.2010.11.001>
- Kane, L. (2019). Medscape Pediatrician Lifestyle, Happiness, and Burnout Report 2019. Retrieved from <http://medscape.org/slideshow/2019-lifestyle-pediatrician-6011147>
- Keeton, K., Fenner, D., Johnson, T., & Hayward, R. (2007). Predictors of physician career satisfaction, work-life balance, and burnout. *Obstetrics & Gynecology*, 109(4), 949–955. <https://doi.org/10.1097/01.AOG.0000258299.45979.37>
- Kezar, A. (2011). Grassroots leadership encounters with power dynamics and oppression. *International Journal of Qualitative Studies in Education*, 24(4), 471-500.
<https://doi.org/10.1080/09518398.2010.529848>
- Kezar, A., & Sam, C. (2011). Understanding non-tenure track faculty: New assumptions and theories for conceptualizing behavior. *American Behavioral Scientist*, 55(11), 1419–1442. <http://doi.org/10.1177/0002764211408879>

Knight, P. T., & Trowler, P. R. (2000). Department-level Cultures and the Improvement of Learning and Teaching Department-level Cultures and the Improvement of Learning and Teaching. *Studies in Higher Education*, 25(1), 1470–174.

<http://doi.org/10.1080/030750700116028>

Lamothe, M., Rondeau, É., Malboeuf-Hurtubise, C., Duval, M., & Sultan, S. (2016).

Outcomes of MBSR or MBSR-based interventions in health care providers: A systematic review with a focus on empathy and emotional competencies.

Complementary Therapies in Medicine, 24, 19–28.

<http://doi.org/10.1016/j.ctim.2015.11.001>

Landrigan, C. P., Fahrenkopf, A. M., Lewin, D., Sharek, P. J., Barger, L. K., Eisner, M.,

... Sectish, T. C. (2008). Effects of the accreditation council for graduate medical education duty hour limits on sleep, work hours, and safety. *Pediatrics*, 122(2), 250–

258. <http://doi.org/10.1542/peds.2008-2914>

Leiter, M. P., & Maslach, C. (2016). Latent burnout profiles: A new approach to

understanding the burnout experience. *Burnout Research*, 3(4), 89–100.

<http://doi.org/10.1016/j.burn.2016.09.001>

Levine, R., Lin, F., Kern, D., Wright, S., & Carrese, J. (2011). Stories from early-career

women in physicians who have left academic medicine: A qualitative study at a single institution. *Academic Medicine*, 86(6), 752–758.

<http://doi.org/10.1097/ACM.0b013e318217e83b>

Linzer, M., Poplau, S., Babbott, S., & Collins, T. (2016). Worklife and wellness in

academic general internal medicine: Results from a national survey. *Internal*

Medicine, 31(9), 1004–1010. <http://doi.org/10.1007/s11606-016-3720-4>

- Linzer, M., Poplau, S., Grossman, E., Varkey, A., Yale, S., Williams, E., ... Barbouche, M. (2015). A cluster randomized trial of interventions to improve work conditions and clinician burnout in primary care: Results from the Health Work Place (HWP) Study. *Journal of General Internal Medicine*, *30*(8), 1105–1111.
<http://doi.org/10.1007/s11606-015-3235-4>
- Litz, B. T., Stein, N., Delaney, E., Lebowitz, L., Nash, W. P., Silva, C., & Maguen, S. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. *Clinical Psychology Review*, *29*, 695-706.
[doi:10.1016/j.cpr.2009.07.003](https://doi.org/10.1016/j.cpr.2009.07.003)
- Ludmerer, K. M. (2014). *Let me heal: The opportunity to preserve excellence in American medicine*. (1st ed.). London, UK: Oxford University Press.
- MacKinnon, M., & Murray, S. (2018). Reframing physician burnout as an organizational problem: A novel approach to physician burnout. *Academic Psychiatry*, *42*, 123–128. <http://doi.org/10.1007/s40596-017-0689-1>
- Mai, R., & Akerson, A. (2003). *The leader as communicator: Strategies and tactics to build loyalty, focus effort, and spark creativity*. New York, NY: American Management Association.
- Maslach, C., & Jackson, S. (1981). MBI: Maslach burnout inventory. *Palo Alto, CA*.
- Maslach, C., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *The Journal of Applied Psychology*, *93*(3), 498–512. <http://doi.org/10.1037/0021-9010.93.3.498>
- Maslach, C., Leiter, M., & Schaufeli, W. (2009). Measuring burnout. In S. Cartwright & C. Cooper (Eds.), *The Oxford Handbook of Organizational Well-Being* (pp. 86–

- 108). Oxford: Oxford University Press.
- Maslach, C., & Schaufeli, W. (1998). Historical and conceptual development of burnout. In W. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research*. Philadelphia, PA: Taylor & Francis.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397–422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Matua, G. A., & Van Der Wal, D. M. (2015). Differentiating between descriptive and interpretive phenomenological research approaches. *Nurse Researcher*, 22(6), 22–27. <http://doi.org/10.7748/nr.22.6.22.e1344>
- McClafferty, H., & Brown, O. (2014). Physician health and wellness. *Pediatrics*, 134(4), 830–835. <http://doi.org/10.1542/peds.2014-2278>
- McQueen, P. (n.d.). Social and Political Recognition. In Internet Encyclopedia of Philosophy. Internet Encyclopedia of Philosophy Pub. Retrieved from https://www.iep.utm.edu/recog_sp/#H4
- Miles, M., & Huberman, A. (1994). *Qualitative Data Analysis* (2nd ed.). Thousand Oaks, CA: Sage.
- O’Meara, K., & Bloomgarden, A. (2011). The pursuit of prestige: The experience of institutional striving from a faculty perspective. *The Journal of the Professoriate*, 4(1), 39-73. Retrieved from <https://static1.squarespace.com/static/52aa1677e4b069d1317f42d0/t/5a00db0a085229b51decbf92/1510005514932/OMeara+Bloomgarden+%282011%29+The+pursuit+of+prestige.pdf>
- O’Meara, K., & Braskamp, L. (2005). Aligning faculty reward systems and development

- to promote faculty and student growth. *NASPA Journal (online)*, 42(2).
<https://doi.org/10.2202/1949-6605.1474>
- Olson, K., Kemper, K., & Mahan, J. (2015). What factors promote resilience and protect against burnout in first-year pediatric and medicine-pediatric residents? *Journal of Evidence-Based Complementary & Alternative Medicine*, 20(3), 192–198.
<http://doi.org/10.1177/2156587214568894>
- Panagioti, M., Panagopoulou, E., Bower, P., Lewith, G., Kontopantelis, E., Chew-Graham, C., ... Esmail, A. (2017). Controlled interventions to reduce burnout in physicians: A systematic review and meta-analysis. *JAMA Internal Medicine*, 177(2), 195–205. <http://doi.org/10.1001/jamainternmed.2016.7674>
- Parks, T. (2017). Report reveals severity of burnout by specialty. *AMA Wire*. Retrieved February 17, 2017, from <https://wire.ama-assn.org/life-career/report-reveals-severity-burnout-specialty>
- Patton, M. Q. (2002). *Qualitative Research and Evaluation Methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Peckham, C. (2018). Medscape National Physician Burnout and Depression Report 2018. Retrieved from <http://medscape.com/slideshow/2018-lifestyle-burnout-depression-6009235#18>
- Pediatrics Academic, Clinical, and Research Sections and Divisions. (n.d.). Retrieved May 8, 2018, from <http://louisville.edu/medicine/departments/pediatrics/divisions>
- Pietkiewicz, I., & Smith, J. (2014). A practical guide to using Interpretative Phenomenological Analysis in qualitative research psychology. *Czasopismo Psychologiczne Psychological Journal*, 20(1). <http://doi.org/10.14691/CPJ.20.1.7>

- Pifer, M. J., Baker, V. L., & Lunsford, L. G. (2019). Culture, colleagues, and leadership: The academic department as a location of faculty experiences in liberal arts colleges. *The Review of Higher Education, 42*(2), 537-564.
- Polit, D. F., & Beck, C. T. (2010). Generalization in quantitative and qualitative research: Myths and strategies. *International Journal of Nursing Studies, 47*(11), 1451–1458.
<http://doi.org/10.1016/j.ijnurstu.2010.06.004>
- Polkinghorne, D. E. (1989). Phenomenological research methods. In *Existential-Phenomenological Perspectives in Psychology* (pp. 41–60). Boston, MA: Springer US.
- Pollart, S., Novielli, K., Brubaker, L., Fox, S., Dandar, V., Radosevich, D., & Misfeldt, M. (2015). Time well spent: The association between time and effort allocation and intent to leave among clinical faculty. *Academic Medicine, 90*(3), 365–371.
<http://doi.org/10.1097/ACM.0000000000000458>
- Pololi, L., Conrad, P., Knight, S., & Carr, P. (2009). A study of the relational aspects of the culture of academic medicine. *Academic Medicine, 84*(1), 106–114.
<http://doi.org/10.1097/ACM.0b013e3181900efc>
- Pololi, L., Evans, A., Civian, J., Vasilon, V., Coplit, L., Gillum, L., ... Brennan, R. (2015). Mentoring faculty: A US national survey of its adequacy and linkage to culture in academic medical centers. *Journal of Continuing Education in the Health Professions, 35*(3), 176–184. <https://doi.org/10.1002/chp.21294>
- Pololi, L., Kern, D. E., Carr, P., Conrad, P., & Knight, S. (2009). The culture of academic medicine: Faculty perceptions of the lack of alignment between individual and institutional values. *Journal of General Internal Medicine, 24*(12), 1289–1295.

<http://doi.org/10.1007/s11606-009-1131-5>

- Pololi, L., Krupat, E., Civian, J., & Ash, A. (2012). Why are a quarter of faculty considering leaving academic medicine? A study of their perceptions of institutional culture and intentions to leave at 26 representative US. *Academic Medicine*, 87(7), 859–869. <http://doi.org/10.1097/ACM.0b013e3182582b18>
- Rohland, B. M., Kruse, G. R., & Rohrer, J. E. (2004). Validation of a single-item measure of burnout against the Maslach Burnout Inventory among physicians. *Stress and Health*, 20(2), 75–79. <http://doi.org/10.1002/smi.1002>
- Sabagh, Z., Hall, N. C., & Saroyan, A. (2018). Antecedents, correlates and consequences of faculty burnout. *Educational Research*, 60(2), 131–156. <http://doi.org/10.1080/00131881.2018.1461573>
- Schaufeli, W. B. (2017). Applying the Job Demands-Resources model: A ‘how to’ guide to measuring and tackling work engagement and burnout. *Organizational Dynamics*, 46, 120-132. <http://dx.doi.org/10.1016/j.orgdyn.2017.04.008>
- Schaufeli, W. B. (2015). Engaging leadership in the job demands-resources model. *Career Development International*, 20(7), 446–463. <https://doi.org/10.1108/CDI-02-2015-0025>
- Schaufeli, W. B., & Bakker, A. (2003). Utrecht Work Engagement Scale Preliminary Manual. Utrecht University.
- Schaufeli, W. B., Leiter, M. P., & Maslach, C. (2009). Burnout: 35 years of research and practice. *Career Development International*, 14(3), 204–220. <http://doi.org/10.1108/13620430910966406>
- Scheepers, R. A., Arah, O. A., Heineman, M. J., & Lombarts, K. M. J. M. H. (2015). In

- the eyes of residents good supervisors need to be more than engaged physicians: The relevance of teacher work engagement in residency training. *Advances in Health Science Education*, 20, 441–455. <http://doi.org/10.1007/s10459-014-9538-0>
- Schor, N., Guillet, R., & McAnarney, E. (2011). Anticipatory guidance as a principle of faculty development: Managing transition and change. *Academic Medicine*, 86(10), 1235–1240. <http://doi.org/10.1097/ACM.0b013e31822c1317>
- Schrijver, I. (2016). Pathology in the medical profession?: Taking the pulse of physician wellness and burnout. *Archives of Pathology and Laboratory Medicine*. <http://doi.org/10.5858/arpa.2015-0524-RA>
- Schrijver, I., Brady, K. J. S., & Trockel, M. (2016). An exploration of key issues and potential solutions that impact physician wellbeing and professional fulfillment at an academic center. *PeerJ*, 4, e1783. <http://doi.org/10.7717/peerj.1783>
- Schwartz, M. S., & Will, G. T. (1953). Low morale and mutual withdrawal on a mental hospital ward. *Psychiatry*, 16(4), 337–353. <http://doi.org/10.1080/00332747.1953.11022937>
- Semmer, N. (1996). Individual differences, work stress, and health. In M. J. Schabracq, & J. A. M. Winnubst (Eds.), *Handbook of Work and Health Psychology* (pp. 51–86). Chichester, UK: Wiley.
- Seritan, A. (2013). How to recognize and avoid burnout. In L. Roberts (Ed.), *The Academic Medicine Handbook* (pp. 447–453). New York, NY: Springer.
- Shanafelt, T. D., Boone, S., Tan, L., Dyrbye, L. N., Sotile, W., Satele, D., ... Oreskovich, M. R. (2012). Burnout and satisfaction with work-life balance among US physicians relative to the general US population. *Archives of Internal Medicine*, 172(18), 1377–

85. <http://doi.org/10.1001/archinternmed.2012.3199>
- Shanafelt, T. D., Dyrbye, L. N., Sinsky, C., Hasan, O., Satele, D., Sloan, J., & West, C. P. (2016). Relationship between clerical burden and characteristics of the electronic environment with physician burnout and professional satisfaction. *Mayo Clinic Proceedings*, *91*(7), 836–848. <http://doi.org/10.1016/j.mayocp.2016.05.007>
- Shanafelt, T. D., Gorringer, G., Menaker, R., Storz, K. A., Reeves, D., Buskirk, S. J., ... Swensen, S. J. (2015). Impact of Organizational Leadership on Physician Burnout and Satisfaction. *Mayo Clinic Proceedings*, *90*(4), 432–440. <http://doi.org/10.1016/j.mayocp.2015.01.012>
- Shanafelt, T. D., & Noseworthy, J. H. (2017). Executive leadership and physician well-being. *Mayo Clinic Proceedings*, *92*(1), 129–146. <http://doi.org/10.1016/j.mayocp.2016.10.004>
- Shanafelt, T. D., Sloan, J. A., & Habermann, T. M. (2003). The well-being of physicians. *The American Journal of Medicine*, *114*, 513–519. [http://doi.org/10.1016/S0002-9343\(03\)00117-7](http://doi.org/10.1016/S0002-9343(03)00117-7)
- Shanafelt, T. D., West, C. P., Sloan, J. A., Novotny, P. J., Poland, G. A., Menaker, R., ... Dyrbye, L. N. (2009). Career fit and burnout among academic faculty. *Archives of Internal Medicine*, *169*(10), 990–995. <http://doi.org/10.1001/archinternmed.2009.70>
- Shanafelt, T., & Swensen, S. (2017). Leadership and physician burnout: Using the annual review to reduce burnout and promote engagement. *Journal of Medical Quality*, *32*(5), 563–565. <http://doi.org/10.1177/1062860617691605>
- Sinsky, C., Dyrbye, L. N., West, C. P., Satele, D., Tutty, M., & Shanafelt, T. D. (2017). Professional satisfaction and the career plans of US physicians. *Mayo Clinic*

- Proceedings*, 92(11), 1625–1635. <http://doi.org/10.1016/j.mayocp.2017.08.017>
- Slavin, S., Schindler, D., Chibnall, J., Fendell, G., & Shoss, M. (2012). PERMA: A model for institutional leadership and culture change. *Academic Medicine*, 87(11), 1481. <http://doi.org/10.1097/ACM.0b013e31826c525a>
- Smart, J. C. (1990). A causal model of faculty turnover intentions. *Research in Higher Education*, 31(5), 405-424. Retrieved from <https://www.jstor.org/stable/40195946>
- Smith, J. (1996). Beyond the divide between cognition and discourse: Using interpretive phenomenological analysis in health psychology. *Psychology and Health*, 11, 261–271. <https://doi.org/10.1080/08870449608400256>
- Smith, J. A. (2004). Reflecting on the development of interpretative phenomenological analysis and its contribution to qualitative research in psychology. *Qualitative Research in Psychology*, 2004(1), 39–54. <http://doi.org/10.1191/1478088704qp004oa>
- Smith, J. A., & Osborn, M. (2003). Interpretive phenomenological analysis. In *Qualitative Psychology: A Practical Guide to Research Methods* (pp. 53–80). London; Thousand Oaks, CA: Sage.
- Smith, P. O., & Bunton, S. A. (2012). Make the context work for you: Faculty in a changing academic medicine landscape. *Journal of Clinical Psychology in Medical Settings*, 19, 22–29. <http://doi.org/10.1007/s10880-011-9286-8>
- Sood, A., Prasad, K., Schroeder, D., & Varkey, P. (2011). Stress management and resilience training among department of medicine faculty: A pilot randomized clinical trial. *Journal of General Internal Medicine*, 26(8), 858–861. <http://doi.org/10.1007/s11606-011-1640-x>

- Squiers, J. J., Lobdell, K. W., Fann, J. I., & Dimairo, J. M. (2017). Physician burnout: Are we treating the symptoms instead of the disease? *Annals of Thoracic Surgery*, *104*(1117–1122). <http://doi.org/10.1016/j.athoracsur.2017.08.009>
- Stucky, E. R., Dresselhaus, T. R., Dollarhide, A., Shively, M., Maynard, G., Jain, S., ... Rutledge, T. (2009). Intern to attending: assessing stress among physicians. *Academic Medicine*, *84*(2), 251–7. <http://doi.org/10.1097/ACM.0b013e3181938aad>
- Sugrue, E. (2019). Understanding the effect of moral transgressions in the helping professions: In search of conceptual clarity. *Social Services Review*, *March 2019*, 4–25. <https://doi.org/10.1086/701838>
- Swensen, S., Kabcenell, A., & Shanafelt, T. (2016). Physician-organization collaboration reduces physician burnout and promotes engagement: The Mayo Clinic Experiences. *Journal of Healthcare Management*, *61*(2), 105–127. <http://dx.doi.org/10.1097/00115514-201603000-00008>
- Tierney, W. G., & Lanford, M. (2016). *Cultivating Strategic Innovation In Higher Education*. New York, NY: TIAA Institute.
- Tierney W. G., & Lanford, M. (2018). Institutional culture in higher education. In J. C. Shin & P. Teixeira (Eds.), *Encyclopedia of International Higher Education Systems and Institutions*. https://doi.org/10.1007/978-94-017-9553-1_544-1
- Trowler, P. (2012). *Tribes and territories in the 21st century: Rethinking the significance of disciplines in higher education*. (P. Trowler, M. Saunders, & V. Bamber, Eds.). London, UK: Routledge.
- Trowler, P. (2014). Academic tribes and territories: The theoretical trajectory. *Osterreichische Zeitschrift Geschichtswissenschaften*, *25*(3), 17–26. Retrieved from

https://www.researchgate.net/publication/289237930_Academic_tribes_and_territories_The_theoretical_trajectory

- van den Berg, B. A. M., Bakker, A. B., & ten Cate, Th. D. (2013). Key factors in work engagement and job motivation of teaching faculty at a university medical centre. *Perspectives in Medical Education*, 2, 264–275. <http://doi.org/10.1007/s40037-013-0080-1>
- van den Berg, J. W., Verberg, C. P. M., Berkhout, J. ., Lombarts, M. J. M. H., Scherpbier, A. J. J. A., & Jaarsma, A. D. C. (2015). A qualitative interview study on the positive well-being of medical school faculty in their teaching role: job demands, job resources and role interaction. *BMC Research Notes*, 8, 401–411. <http://doi.org/10.1186/s13104-015-1393-4>
- Wagner, J., Fleming, A., & Moynahan, K. (2015). Benefits to faculty involved in medical school learning communities. *Medical Teacher*, 37(5), 476–481. <http://doi.org/10.3109/0142159X.2014.947940>
- Wallace, J. E., Lemaire, J. B., & Ghali, W. a. (2009). Physician wellness: a missing quality indicator. *The Lancet*, 374(9702), 1714–1721. [http://doi.org/10.1016/S0140-6736\(09\)61424-0](http://doi.org/10.1016/S0140-6736(09)61424-0)
- Webber, E., Schaffer, J., Willey, C., & Aldrich, J. (2018). Targeting pajama time: efforts to reduce physician burnout through electronic medical record (EMR) improvements. *Pediatrics*, 142(1), 611–611. http://doi.org/10.1542/PEDS.142.1_MEETINGABSTRACT.611
- Weike, K. E., & Sutcliffe, K. M. (2015). *Managing the unexpected: Sustained performance in a complex world* (3rd edition). Hoboken, NJ: Wiley.

- West, C., Dyrbye, L., Rabatin, J., Call, T., Davidson, J., Multari, A., ... Shanafelt, T. (2014). Intervention to promote physician well-being, job satisfaction, and professionalism: A randomized clinical trial. *JAMA Internal Medicine*, *174*(4), 527–532.
- West, C., Dyrbye, L., & Shanafelt, T. (2018). Physician burnout: Contributors, consequences, and solutions. *Journal of Internal Medicine*, *283*, 516–529. <http://doi.org/10.1111/joim.12752>
- West, C. P., Dyrbye, L. N., Sloan, J. A., & Shanafelt, T. D. (2009). Single item measures of emotional exhaustion and depersonalization are useful for assessing burnout in medical professionals. *Journal of General Internal Medicine*, *24*(12), 1318–1321. <http://doi.org/10.1007/s11606-009-1129-z>
- Windover, A., Martinez, K., Mercer, M., Neuendorf, K., Boissy, A., & Rothberg, M. (2018). Correlates and outcomes of physician burnout within a large academic medical center. *JAMA Internal Medicine*, (February), E1–E3. <http://doi.org/10.1001/jamainternmed.2018.0019>
- ZDoggMD. (2019 March 8). It's not burnout, it's moral injury [vlog]. Retrieved from <https://zdoggm.com/moral-injury>

APPENDIX A: INTERVIEW SCHEDULES

Interview Schedule, Interview 1

Question	Research Question	Citation	Value of Question
Tell me about your role as a faculty member.	-	-	Warm up question; validates job description from department; basis for further questions/probes
Did you know early on you wanted to be a [specialty]? How did you arrive at this point?	-	Siedman, 2006	Personal history; insight into turning points/important life events
Tell me about your career trajectory. What was it? Where are you now? Has your trajectory changed in the last 5 years?	-	Pololi, 2012	Lays out possible reasoning for staying/leaving as noted in Pololi
What does a typical day on service look like for you?	1 & 2		Personal history; more detailed job description; basis for further questions/probes
What does a typical non-service day look like for you?	1 & 2		Personal history; more detailed job description; basis for further questions/probes
Could you describe your ideal job description or day at work?	1 & 2	Shanafelt, 2009	Establishes comparison for career fit; outlines job resources v job demands
What parts of your job do you find difficult/frustrating/ stressful?	1	Bakker et al, 2008	Describes job demands; basis for further probes
<i>Probes/areas for discussion</i>			
<i>Dysfunction in workplace</i>		<i>Schrijver et al, 2016</i>	<i>Causes/risk factors for burnout, according to literature</i>
<i>High stress, poor control over job duties, chaotic environment</i>		<i>Linzer, 2016; Schrijver, 2016)</i>	
<i>Changing practice standards, protocols</i>		<i>Wallace et al, 2009</i>	
<i>Hours worked per week</i>		<i>Dyrbye, 2011</i>	

You talked a lot about your role as ___ as a positive aspect of your job. What makes it so positive??	1	Schrijver et al, 2016; Shanafelt, 2009	Gauging career fit, job resources
<i>Probes/areas for discussion</i>			
<i>Activities, tasks, specific parts</i>			<i>Getting at specifics of career fit, job resources</i>
What is the culture like in your division/ department?	1 & 2	Pololi, 2009; Pololi, 2012; Shanafelt, 2003; Schrijver et al, 2016	Establishes support as a resource; gauges work culture as contributor to burnout or wellness
<i>Probes/areas for discussion</i>			
<i>Shared beliefs, values, ways of life</i>		<i>Leininger, 1985</i>	<i>Factors of culture in health care</i>
<i>Social support</i>		<i>Shanafelt, 2003; Schrijver et al, 2016</i>	<i>Organizational manifestations of cultural factors leading to faculty engagement, according to literature</i>
<i>Collaboration with colleagues</i>		<i>Pololi, 2009</i>	
<i>Support from leadership</i>		<i>Linzer, 2016; Bickel, 2008</i>	
<i>Sense of belonging</i>		<i>Pololi, 2012</i>	
I'm interested in how you balance some of the more stressful parts of your work. After a bad day, what are some things you do to help relieve stress?	2	Bakker et al, 2008; Bakker, 2011	Establishes job resources, personal resources
Where do you typically find support during stressful days?	1 & 2	Lamothe, 2016; Shanafelt, 2003; Schrijver et al, 2016	Establishes job resources, personal resources
<i>Probes/areas for discussion</i>			
<i>Social support</i>		<i>Shanafelt, 2003; Schrijver et al, 2016</i>	<i>Factors leading to faculty engagement, according to literature</i>
<i>Wellness practices</i>		<i>Lamothe, 2016; Shanafelt, 2003</i>	
What is your family structure like? (Partner/kids? Childcare? Dual incomes?)	1	Beckett, 2015	Personal history; establishes personal demands, personal resources
How do work responsibilities impact your home life?	1 & 2	Dyrbye, 2011	Establishes personal demands, personal resources
Looking back on what we've talked about today, how would you define burnout and where do you think you fit within that definition?	-	West et al, 2009	Use of single question to assess burnout validated; establishes faculty self-reported level of burnout

What does burnout feel like?	-	Dyrbye, 2014; Eckleberry-Hunt, 2009; Landrigan, 2008; Maslach & Leiter, 2008	Describes physical/mental symptoms associated with burnout (or believed to occur with burnout)
Are there parts of your role within the university that I've missed that you feel are important?	-	-	Closes interview and allows faculty to elaborate on topics not currently discussed

Interview Schedule, Interview 2

Question	Research Question	Citation	Value of Question
Are there things you thought of after the first interview that you think I need to know?	-	-	Warm up question; basis for further questions/probes
Review of notes, etc since first interview.	-	-	Provides insight into faculty burnout/wellness; basis for further questions/probes.
<i>Probes/areas for discussion</i>			
<i>Have there been any events or changes since the last interview that made you feel more or less burned out?</i>	1 & 2	-	Provides insight into faculty burnout/wellness; basis for further questions/probes.
<i>Do you look at things differently since we talked last time?</i>	1 & 2	-	
When do you feel most stressed or burned out in your current job?	1 & 2	Bakker et al, 2008	Personal history; frames further discussion; basis for further questions/probes
When do you feel most engaged in your current faculty role?	1 & 2	Pololi, 2012; Maslach & Leiter, 2008	Establishes job resources; faculty that are engaged are usually less prone to burnout
When do you feel most successful with your work?	1 & 2	Maslach & Leiter, 2008	Establishes job resources; gives insight into work culture
<i>Probes/areas for discussion</i>			
<i>with trainees</i>		<i>Pololi, 2009</i>	<i>Specific areas of work where feeling successful is associated with lower burnout, according to literature</i>
<i>with patients</i>		<i>Schrijver et al, 2016</i>	
<i>recognition of work</i>		<i>Maslach & Leiter, 2008; van den Berg et al, 2015; Hakanen et al, 2008</i>	
How does your definition of success compare to the way your division/	1	Shanafelt, 2009	Gauges career fit

department defines success?			
Do you feel like your division chief or department leadership understands and supports you through the stressful part of your job? Why/why not?	1 & 2	Bickel, 2008; Linzer, 2016; Schrijver, 2016; Schrijver et al, 2016	Establishes supportive leadership as catalyst of burnout or wellness
Do your colleagues feel the same way about the current work culture? How do you know?	1 & 2	Schrijver et al, 2016; Pololi, 2012	Gauges faculty culture, connectedness, perception of fit in organization, camaraderie within division
How could your division/ department make you feel more supported or successful?	2	Bickel, 2008; Linzer, 2016; Schrijver, 2016; Schrijver et al, 2016	Points of deficiency/ suggestions for improvement to take to stakeholders
Can you envision an event or time when you would leave the university?	1 & 2	Pololi, 2012	Establishes tipping point of burnout
<i>Probes/areas for discussion</i>			
<i>relatedness, inclusion, engagement, self-efficacy, values alignment, leadership aspirations (covered in Int1), institutional commitment to increased faculty support</i>	1 & 2	<i>Pololi 2012</i>	<i>Factors associated with faculty leaving their current institution/academic medicine altogether</i>
Is there anything else regarding burnout, wellness or support that is important that I haven't asked about?	-	-	Closes interview and allows faculty to elaborate on topics not currently discussed

CURRICULUM VITAE

Tara McKinley, M.A.
571 South Floyd Street, Suite 412
Louisville, KY 40202
(502) 629-8842
tara.mckinley@louisville.edu

EDUCATION

- 08/2003 - 05/2007 B.A. in English (summa cum laude), University of Kentucky,
Lexington, KY
- 08/2008 - 08/2010 M.A. in Communication, University of Louisville, Louisville, KY
- 08/2015 - 05/2019 Ph.D. in Educational Leadership and Organization Development,
Specialization in Higher Education Administration, University of
Louisville, Louisville, KY

ACADEMIC APPOINTMENTS

- 07/2014 - pres Administrative Director, Certificate in Global Child Health

Department of Pediatrics
University of Louisville
Louisville, KY

OTHER POSITIONS AND EMPLOYMENT

- 04/2010 – 06/2015 Program Coordinator/Senior, Pediatric Residency Program
Department of Pediatrics
University of Louisville
Louisville, KY
- 07/2015 - pres Assistant Program Director, Pediatric Residency Program
Department of Pediatrics
University of Louisville

Louisville, KY

CERTIFICATION AND LICENSURE

PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

07/2010 – pres Association of Pediatric Program Directors
10/2012 – pres, Co-chair, Coordinator Communication Committee
04/2014 – pres, Editorial Board, Share Warehouse
04/2017 – 04/2018, Vision 2020 Technology Task Force
10/2015 – 12/2017 American Educational Research Association, graduate student member
06/2018 – pres International Association of Medical Science Educators, graduate student member

HONORS AND AWARDS

11/2018 2018 Team of the Year Award (nomination), University of Louisville School of Medicine
04/2019 Dean's Citation, School of Interdisciplinary & Graduate Studies, University of Louisville

COMMITTEE ASSIGNMENTS AND ADMINISTRATIVE SERVICES

01/2016 – pres Faculty Development Committee, Department of Pediatrics, University of Louisville
07/2016 – 06/2017, faculty facilitator, Clinician Teacher Certificate Program
01/2019 – 12/2019, faculty facilitator, Scholarship for Clinicians Certificate Program
01/2016 – 12/2018 Curriculum Committee, Department of Pediatrics, University of Louisville
01/2017 – pres Resident & Faculty Wellness Task Force, Department of Pediatrics, University of Louisville (chair)
05/2017 – 12/2017 GME Research & Non-Clinical Curriculum Advisory Committee, University of Louisville
07/2017 – pres Clinical Competency Committee, Department of Pediatrics, University of Louisville
07/2018 – pres Global Health Steering Committee, Department of Pediatrics, University of Louisville
01/2019 – pres Program Evaluation Committee, Department of Pediatrics, University of Louisville (replaced Curriculum Committee)

EDUCATIONAL ACTIVITIES

Faculty

1. Qualitative research mentor (as part of Clinician Teacher Certificate curriculum). University of Louisville, 2016-2017 academic year, Louisville, KY.
2. Adult Learning Theory, course developer/instructor (as part of Clinician Teacher Certificate curriculum). University of Louisville, September 2016, Louisville, KY.
3. The Mindful Teacher & Mentor, course developer/instructor (as part of Clinician Teacher Certificate Curriculum). University of Louisville, February 2017, Louisville, KY.
4. Qualitative Research, Part 1. Faculty Development, University of Louisville, February 2018, Louisville, KY.
5. Qualitative Research, Part 2. Faculty Development, University of Louisville, March 2018, Louisville, KY.
6. Qualitative Research (as part of the Scholarship for Clinicians Certificate curriculum), University of Louisville, April 2019, Louisville, KY.

Residents

1. Residents As Teachers, instructor/table moderator. University of Louisville, October 2011, Louisville, KY.
2. Wellness – True Colors, course developer/instructor (noon conference). University of Louisville, August 2016, April 2018, Louisville, KY.
3. Scholarly Activity Mentor, Pediatric Residency Program. University of Louisville, July 2017 – pres, Louisville, KY.
4. Resident/Faculty Mentoring Program Administrator, Pediatric Residency Program. University of Louisville, July 2017-pres, Louisville, KY.
5. Introduction to Wellness, Pediatric Residency Program. University of Louisville, July 2018, Louisville, KY.
6. Burnout & Wellness, instructor, Pediatric Fellow Lecture Series. University of Louisville, March 2019, Louisville, KY.

Coordinators/Staff

1. New Innovations Residency Management Software training course, course developer. University of Louisville, August 2012, Louisville, KY.

GRANTS AND CONTRACTS

1. Graduate Student Council Research Grant, \$250. University of Louisville, October 2018, Louisville, KY.

EDITORIAL WORK

- 04/2015 - pres Editorial Board, Share Warehouse, Association of Pediatric Program Directors
- 11/2018 – pres Journal of Health Care for the Poor and Underserved, article reviewer

ABSTRACTS AND PRESENTATIONS

ORAL PRESENTATIONS

National/International Meetings

1. **McKinley, T.**, Boland, K. Teaching Pediatricians to Talk: A Needs Assessment Survey. International Conference on Communication in Healthcare, October 2011, Chicago, IL.
2. Peterson, E., Calhoun, A., Miller, K., **McKinley, T.**, Murray, S., Porter, M., Potter, K., Boland, K. A communication skills curriculum for residents: Update on progress. International Conference on Communication in Healthcare, October 2013, Montreal, Canada.
3. **McKinley, T.** Coordinators' Communication Committee, table talk. Association of Pediatric Program Directors' Spring Meeting, April 2014, Chicago, IL.
4. **McKinley, T.** Share Warehouse Update, table talk. Association of Pediatric Program Directors' Spring Meeting, April 2016, New Orleans, LA.
5. **McKinley, T.** Table Talk: APPD Technology, Share Warehouse, coorCOMM newsletter. Association of Pediatric Program Directors' Spring Meeting, April 2017, Anaheim, CA.

6. **McKinley, T.**, Carpenter, P. Table Talk: APPD Technology & Share Warehouse. Association of Pediatric Program Directors' Spring Meeting, April 2018, Atlanta, GA.
7. **McKinley, T.** Table Talk: Kahooting! For Non-millennials: It's Not as Scary as You Think. Association of Pediatric Program Directors' Spring Meeting, April 2018, Atlanta, GA.

Local/Regional Meetings

1. **McKinley, T.** Poster and Abstract Creation. University of Louisville Program Coordinators' Meeting, March 2013, Louisville, KY.
2. **McKinley, T.** Clinical Competency Committees, Part 1. University of Louisville Program Coordinators' Meeting, October 2013, Louisville, KY.
3. **McKinley, T.** Clinical Competency Committees, Part 2. University of Louisville Program Coordinators' Meeting, November 2013, Louisville, KY.
4. **McKinley, T.** Faculty Wellness and Burnout. Association of Pediatric Program Directors Mid-America Regional Meeting, October 2016, Columbus, OH.
5. **McKinley, T.** Interpretive Phenomenological Analysis of the Interplay of Factors Affecting Burnout in Academic Medical Faculty. Graduate Student Regional Research Conference, February 2019, Louisville, KY.
6. **McKinley, T.** Interpretive Phenomenological Analysis of the Interplay of Factors Affecting Burnout in Academic Medical Faculty. Spring Research Conference, March 2019, Lexington, KY.

POSTERS

National/International Meetings

1. **McKinley, T.**, Bryant, K., Calhoun, A., Devlin-Phinney, L., Miller K., Murray, S., Peterson, E., Porter, M., Potter, K., Boland, K. Teaching Pediatricians to Talk: A Needs Assessment. International Conference on Communication in Healthcare, October 2011, Chicago, IL.
2. Boland, K., **McKinley, T.**, Cross, K., Stevenson, M. Predicting Pediatric Board Passage. Association of Pediatric Program Directors, March 2012, San Antonio, TX.

3. Ashley J., Keenan, T., Lockett, B., **McKinley, T.**, Ratanapool, L., Rife, H.P., Boland, K. Program Coordinator Leadership Council Receives Big Rewards with a Little Effort. Association for Hospital Medicine Education, May 2013, Las Vegas, NV.
4. Ashley, J., Roberts, J., Ratanapool, L., Keenan, T., **McKinley, T.** Building an Effective Graduate Medical Education Community. Association for Hospital Medicine Education, May 2014, Charleston, SC. 2nd place, Viewers' Choice.
5. Ashley, J., Woods, T., Jacobi, P., Boland, K., **McKinley, T.** Coordinators' Peer Mentoring Program. Association for Hospital Medicine Education, May 2014, Charleston, SC.
6. Tripathy, S., Miller, K., Berkenbosch, J., **McKinley, T.**, Boland, K., Brown, S., Calhoun, A. When the Mannequin Dies: Creation and Exploration of a Theoretical Framework Using a Mixed Methods Approach. International Meeting for Simulation in Healthcare, January 2015, New Orleans, LA. 7th Annual Symposium on Teaching and Learning, April 2016, Springfield, IL.
7. **McKinley, T.**, Holloman, J., Leslie, K., Jones, F., Calhoun, A., Boland, K. Qualitative Evaluation of a Poverty & Social Justice Rotation. Association of Pediatric Program Directors, April 2017, Anaheim, CA.
8. Lehto E, Tarshish G, Stevenson M, ***McKinley T**, Anderson B. Awkward Conversations: Impact of Leading School-based Sexual Education Seminars on Resident Comfort Discussing Sexual Health with Adolescent Patients. Pediatric Academic Societies, May 2018, Toronto, Ontario.

Local/Regional Meetings

1. **McKinley T.**, Bryant K., Calhoun A., Devlin-Phinney, L., Miller, K., Murray, S., Peterson E., Porter, M., Potter, K., Boland, K. Teaching Pediatricians to Talk: A Needs Assessment. Research!Louisville, October 2011, Louisville, KY.
2. Tripathy, S., Miller, K., Berkenbosch, J., **McKinley, T.**, Boland, K., Brown, S., Calhoun, A. When the Mannequin Dies: Creation and Exploration of a Theoretical Framework Using a Mixed Methods Approach. Department of Pediatrics Poster Session, University of Louisville, June 2015.

3. Tripathy, S., Miller, K., Berkenbosch, J., **McKinley, T.**, Boland, K., Brown, S., Calhoun, A. When the Mannequin Dies: Creation and Exploration of a Theoretical Framework Using a Mixed Methods Approach. Department of Pediatrics Poster Session, University of Louisville, June 2015.
4. Holloman, J., ***McKinley, T.**, Jones, VF., Calhoun, A., Leslie, K., Boland, K. Evaluation of Poverty and Social Justice Rotation in Pediatrics Residency Using Narrative Analysis. Department of Pediatrics Poster Session, University of Louisville, June 2016, Louisville, KY. 2nd place, Original Research by a Resident. 1st place, Viewers' Choice.
5. **McKinley, T.**, Holloman, J., Leslie, K., Jones, F., Calhoun, A., Boland, K. Qualitative Evaluation of a Poverty & Social Justice Rotation. Research!Louisville, September 2017, Louisville, KY. 3rd place, Greenberg Award for Medical Education Research.
6. Lehto E, Tarshish G, Stevenson M, ***McKinley T**, Anderson B. Awkward Conversations: Impact of Leading School-based Sexual Education Seminars on Resident Comfort Discussing Sexual Health with Adolescent Patients. Department of Pediatrics Poster Session, University of Louisville, June 2018, Louisville, KY.

PUBLICATIONS

PEER-REVIEWED

Original research articles

1. Tripathy, S., Miller, K., Berkenbosch, J., **McKinley T.**, Boland, K., Brown, S., Calhoun, A. (2016). When the Mannequin Dies: Creation and Exploration of a Theoretical Framework Using a Mixed Methods Approach. *Simulation in Healthcare*, 11(3): 149-156. DOI: 10.1097/SIH.000000000000138
2. Peterson E., Boland, K., Bryant, K., **McKinley, T.**, Porter, M., Potter, K., Calhoun A. (2016). Development of a Comprehensive Communication Skills Curriculum for Pediatrics Residents. *Journal of Graduate Medical Education*, 8(5): 739-746. DOI: 10.4300/JGME-D-15-00485.1
3. Boland, K., **McKinley, T.** (2017). Qualitative Evaluation of a Poverty and Social Justice Rotation (Descriptive Abstract). *Pediatrics*, 17(5): e49. DOI: <https://doi.org/10.1016/j.acap.2017.04.138>

Review articles

1. **McKinley, T.**, Boland, K., Mahan, J. (2017). Burnout and Interventions in Pediatric Residency: A Literature Review. *Burnout Research*, 6: 9-17. DOI: 10.1016/j.burn.2017.02.003

Group publications

1. Wilson PM, Kemper KJ, Schubert CJ, Batra M, Staples BB, Serwint JR, McClafferty H, Mahan JD; **Pediatric Resident Burnout-Resilience Study Consortium**. (2017). National Landscape of Interventions to Improve Pediatric Resident Wellness and Reduce Burnout. *Academic Pediatrics*, 17(8), 801-804.
2. Reed S, Kemper KJ, Schwartz A, Batra M, Staples BB, Serwint JR, McClafferty H, Schubert CJ, Wilson PM, Rakowsky A, Chase M, Mahan JD., **Pediatric Resident Burnout-Resilience Study Consortium**. (2018). Variability of Burnout and Stress Measures in Pediatric Residents: An Exploratory Single-Center Study From the Pediatric Resident Burnout-Resilience Study Consortium. *Journal of Evidence Based Integrative Medicine*, 23, online.
3. Kemper KJ, Wilson PM, Schwartz A, Mahan JD, Batra M, Staples BB, McClafferty H, Schubert CJ, Serwint JR, **Pediatric Resident Burnout-Resilience Study Consortium**. (2018). Burnout in Pediatric Residents: Comparing Brief Screening Questions to the Maslach Burnout Inventory. *Academic Pediatrics*, online ahead of print (Nov 3, 2018)
4. Kemper KJ, McClafferty H, Wilson PM, Serwint JR, Batra M, Mahan JD, Schubert CJ, Staples BB, Schwartz A; **Pediatric Resident Burnout-Resilience Study Consortium**. (2018). Do Mindfulness and Self-Compassion Predict Burnout in Pediatric Residents? *Academic Medicine*, online ahead of print (Dec 4, 2018)

NON-PEER-REVIEWED

Books, book chapters, monographs

1. Ashley, J., **McKinley, T.**, Boland, K., Multerer, S. *Your Final Year of Residency Training*. Medical Education Portal, May 2013. (revised annually through 2016)

DEVELOPMENT AND/OR PUBLICATION

Innovative educational programs

1. Clinician Teacher Certificate Program, July 2016
2. Scholarship for Clinicians Certificate Program, July 2018