# EXPERIENCES OF RESIDENCY PROGRAM DIRECTORS IN THEIR ROLES: EXPLORING WELL-BEING THROUGH BURNOUT AND ENGAGEMENT

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# DEDICATION

Family, everyone who made me who I am today. From my grandparents who demonstrated resilience, hard work, and fortitude to keep moving forward in the face of adversity. My parents, who provided us a safe, fun, encouraging and loving home, as well as how to put the needs of others before your own, to be kind, respectful, and thoughtful. Thank you for being always there to support me through all of my life's decisions both good and bad! I am grateful to have you as my family and all that you have provided for me.

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Kyle A. Robertson

EXPERIENCES OF RESIDENCY PROGRAM DIRECTORS IN THEIR ROLES: EXPLORING WELL-BEING THROUGH BURNOUT AND ENGAGEMENT

Recent literature on well-being of physicians in general, and residency program directors (PD) specifically, has demonstrated those meeting the criteria of burnout reaching almost 50% in physicians, and 20-30% in PDs. However, few studies have explored engagement, or the positive or meaningful aspects, in physicians and no studies have explored engagement in the PD and Assistant PD community. Therefore, this study employed a qualitative approach to explore the experiences of PDs and APDs as they encountered burnout, engagement, and every combination in between through their multifaceted, roles, responsibilities, and tasks embedded in their institutional context and personal lives.

Phase 1 participants (n=3) included two PDs and one APD from Indiana University School of Medicine (IUSM). Participants in Phase 1 took part in three semi-structured interviews at 6-month intervals, and direct observations in their clinical, administrative, and education roles. Phase 2 participants (n=5) were PDs from IUSM who completed a single semi-structured interview based on preliminary results and exploration of Phase 1 participants' experiences. Interviews and field notes from observations were analyzed using inductive thematic analysis, followed by a deductive application of Job Demands-Resources (JD-R) theory. Document analysis was incorporated to add context, understanding, and a rich description of the participants' experiences.

This study found multiple sub-themes situated within four major themes*: It Takes a Village, Integration of the "Hats" They Wear, Motivation and the Meaning of Their Career,* and *Coping*. Exploring the sub-themes to JD-R theory allowed contextualization of how job demands, job resources, personal resources, absence of resources, job crafting, recovery, self-undermining, and strain, interact to add context, nuance, and broader conceptualization of how PD and APD experienced their multifaceted roles.

This study provides a rich description of the experiences of PDs and APDs embedded in their social context of roles, tasks, and responsibilities. These results indicated that understanding how the individual experiences their job demands as they interact with their experiences of job and personal resources, and how the individual proactively engages with their environment through job crafting and recovery enables for a nuanced appreciation of engagement and burnout.

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| | |
|---|---|
| AAMC | Association of American Medical Colleges |
| ACGME | Accreditation Council for Graduate Medical Education |
| AMC | Academic Medical Center |
| APD | Associate Program Director |
| BIPOC | Black Indigenous and Persons of Color |
| COR | Conservation of Resources |
| COVID-19 | Coronavirus Disease of 2019 |
| EHR | Electronic Health Record |
| EMR | Electronic Medical Record |
| FTE | Full Time Equivalent |
| ICU | Intensive Care Unit |
| IRB | Institutional Review Board |
| IUSM | Indiana University School of Medicine |
| JD-R | Job Demands-Resources |
| MBI | Maslach Burnout Inventory |
| PD | Program Director |
| SDT | Self Determination Theory |
| URiM | Underrepresented in Medicine |
| USMLE | United States Medical Licensure Exam |
| UWES | Utrecht Work Engagement Scale |

# CHAPTER 1: INTRODUCTION

Emotional exhaustion, depersonalization (cynicism), and a reduced sense of professional efficacy (lack of achievement and productivity) are the dimensions most often attributed to the phenomenon of burnout, with exhaustion and cynicism being most strongly associated (Maslach and Leiter, 2016; Schaufeli et al., 2020). The seminal work conducted in what he termed "burnout" arose from Freudenberger (1974) working at a free clinic in New York city. In addition, Maslach (1976) was exploring the same phenomenon in "poverty lawyers…, prison personnel, social welfare workers, clinical psychologists and psychiatrists in a mental hospital, child-care workers…" (pg. 16). The initial explorations of burnout were in the context of human services, but it was later extended to encompass workers in every occupation (Schaufeli et al., 2020). Specifically, Maslach (1976) conducted interviews and observations in physicians and nurses, and thus, early burnout research was conducted in the context of healthcare. As burnout research continued, discourse surrounding physician well-being proliferated, even prior to the current pandemic, with one recent study reporting 43.9 % (2147 out of 4893) of physicians surveyed reporting at least one of the three dimensions of burnout (Shanafelt et al., 2019). Thus, there is an appreciation for the prevalence of physician burnout as reported by a multitude of studies, however the level (i.e. organization, team, or individual) at which to best intervene to prevent burnout, in addition how burnout is experienced by individuals in a given social system, is not fully appreciated.

Burnout has many detrimental effects not only for the individual experiencing burnout but can also have harmful effects on the healthcare system at large (Sibeoni et al., 2019). One such detrimental effect of physician burnout is higher turnover, as those

who experience burnout are more prone to view the practice of medicine as less of a calling and more as a job in order to make a living (Jager et al., 2017). Further, a study by Shanafelt and colleagues (2011) found burnout to be the single strongest predictor to leave medicine with a 2.5 odds ratio. With burnout being a predictor of turnover, this not only affects the physician but directly affects patient care as demonstrated with patients who receive care by the same physician for 10 years have better and more cost-effective care (Gill and Mainous, 1998; Shanafelt et al., 2017). In other words, burnout may alter how physicians view their work, which ultimately may lead to turnover and suboptimal patient care.

To advance healthcare delivery in the United States, a Triple Aim was proposed with goals to improve patient care, reduce healthcare cost, and improve population health (Berwick et al., 2008). Further, to meet the goals of the Triple Aim, some have promoted a "fourth aim," physician well-being, forming a "Quadruple Aim" (Berwick et al., 2008; Bodenheimer and Sinsky, 2014). Beyond suboptimal patient care, there is a healthcare organization cost to physician turnover, via less physician productivity, cost to replace physician (estimated at 2-3 times annual salary), and loss of grant funding (at academic medical centers, specifically) (Shanafelt et al., 2017). Other detrimental consequences for the physician burnout include increased association with alcohol use disorder, as well as an increase in suicidal ideation when compared to an age matched general population (Oreskovich et al., 2015; Dyrbye et al., 2008; Shanafelt et al., 2011).

Numerous studies have explored both burnout and interventions, which have enabled researchers to conduct systematic reviews and meta-analyses demonstrating various aspects of the burnout phenomenon to include: correlations of physician burnout

across region and specialty, prevalence, interventions at the individual or organization level, a meta-synthesis of qualitative research, factors associated with burnout, and effects of burnout on physician productivity (Sibeoni et al., 2019; Rotenstein et al., 2018; Williams et al., 2019; Dewa et al., 2014; Lee et al., 2013; West et al., 2016; Panagioti et al., 2017). The majority of burnout studies are quantitative (Rotenstein et al., 2018). However, while there may be an abundance of literature regarding burnout, there is little consensus on burnout definition and most appropriate assessment method, which results in a wide variation in study quality. As illustrated in a recent systematic review, a total of 182 studies, yielded no fewer than 142 unique definitions for those meeting criteria for overall burnout (i.e., all three burnout dimensions) or burnout subcomponents (i.e., one or two burnout dimension subscales), thus making it challenging to appreciate what constitutes burnout in physicians (Rotenstein et al., 2018). This systematic review originally intended to perform a meta-analysis but with such variation in method, study design, and statistical heterogeneity the authors concluded a meta-analysis was not feasible (Rotenstein et al., 2018). Further, Rotenstein and colleagues (2018) state "because of the inconsistences in definitions of and assessment methods for burnout across studies, associations between burnout and sex, age, geography, time, specialty, and depressive symptoms could not be reliably determined" (pg. 1131). A recent meta-synthesis of qualitative studies yielded 33 articles that used a variety of data collection strategies including a predominance utilizing semi-structured interviews, "open-ended interviews," "in-depth interviews," focus groups, and free-text comments, while only one study utilized observation, albeit for one day (Sibeoni et al., 2019). In addition, few studies have employed a model or theoretical framework conceptualizing burnout, thus a

common understanding of the process, as well as where to intervene, is lacking (Williams et al., 2019; Mache et al., 2014; Barello et al., 2021).

Beyond the burnout literature, few have investigated physicians who find meaning, fulfillment, dedication, connection, and vigor from their work. To address this, there has been a shift via the positive psychology framework to explore "strength, resilience, growth and happiness" or in other words, engagement (Eckleberry-Hunt et al., 2018; Seligman and Csikszentmihalyi, 2000).

Kahn (1990) is credited with producing the seminal study in what he termed personal engagement, described as "the simultaneous employment and expression of a person's 'preferred self' in task behaviors that promote connections to work and others, personal presence (physical, cognitive, and emotional), and active, full role performances" (pg. 700). This led to competing conceptualizations of engagement by prominent burnout researchers, with Maslach and Leiter (1997) conceptualizing it as the opposite of burnout and thus measured by the same instrument the Maslach Burnout Inventory (MBI). A competing conceptualization views engagement not as mutually exclusive and perfectly complementary to burnout, but an independent albeit negatively associated construct with burnout (Schaufeli and Bakker, 2004). In other words, having a symptom of burnout as assessed by the MBI one day a week, does not exclude the individual from overflowing with enjoyment and energy the remaining days of the week (Schaufeli and Bakker, 2004).

This has produced much debate as to how these two constructs, engagement and burnout, should be best conceptualized, and thus, explored and understood. Cole and colleagues (2012) performed a meta-analysis of studies using the MBI and the Utrecht

Work Engagement Scale (UWES), and concluded there is a possibility burnout and engagement are redundant. However, this is disputed by studies demonstrating day-to-day and momentary fluctuations, as well as burnout and engagement not being an either-or proposition, with many of these studies using diary study design to capture the short-term fluctuations. (Bakker and Xanthopoulou, 2009; Simbula, 2010; Sonnentag, 2003; Rao et al., 2020; Bakker and Oerlemans, 2019; Bakker et al., 2014, Ohly et al., 2010). Needless to say, there are other proposed conceptualizations, one being a dialectic approach. As stated, the two ends of a dialectic relationship are negatively related, however there are also contradictions. First, the absence of one construct does not mean the presence of the other; and second, there are instances where both are present (Leon et al., 2015). This latter contradiction, where an individual may be both burned out and engaged, may result in presenteeism, where one feels compelled or feeling of obligation to be at work even with health problems (Leon et al., 2015; Lohaus and Haberman, 2019).

Few studies have explored engagement in physicians as defined by Schaufeli and Bakker (2004), and to the researcher's knowledge no studies of physician engagement have used the encompassing definition of engagement as proposed by Kahn (1990). Studies exploring physician engagement have primarily been conducted in Europe with a cross-sectional survey-based study design, and thus, associations may be drawn but no causality (Perreira et al., 2018). Starting with Kahn's (1990) initial description of personal engagement, to Leon and colleague's (2015) proposed dialectical approach, and finally Perreira and colleagues (2018), all advocate and suggest more qualitative studies

to be conducted to better understand the experience of engagement, with an added outcome of identifying and developing strategies to enhance physician engagement.

As previously mentioned, burnout is a predictor of health impairment, poor patient care, and an increased propensity to resign from a position. However, engagement has been demonstrated to mitigate health impairment via a reciprocal process as engaged persons are more inclined to partake in off-job leisure activities (i.e., reading, physical exercise, social interactions, etc.) resulting in them feeling more engaged the following day (Seppala et al., 2012; ten Brummelhuis and Bakker, 2012). Further, job performance (self-reported as well as supervisor-reported) has been seen to significantly improve with engagement with both in role and extra-role performance (Halbesleben and Wheeler, 2008). Interestingly, it has been demonstrated both burnout and engagement may "crossover" and influence fellow team members and colleagues. In other words, those team members exposed to someone experiencing burnout they themselves developed feelings of exhaustion and negative emotions. Fortunately, the same was demonstrated for engagement, where team members who worked in highly engaged teams demonstrated higher levels of "vigor, dedication, and absorption" (Bakker et al., 2006).

It is often assumed individuals in a work setting are passive in their roles, and only react to their work conditions (Bakker and Demerouti, 2018). However, it has been demonstrated individuals play an active role in modifying their work conditions in both a positive and negative way via job crafting (i.e., proactive changes made in an individual's work tasks as well as work relationships) and self-undermining, respectively (Wrzesniewski and Dutton, 2001; Bakker and Demerouti, 2017; Bakker and Demerouti, 2018). Evidence for job crafting predicting work engagement was demonstrated by Vogt

and colleagues (2016), with their study concluding a positive relationship with job crafting and future personal resources (e.g., resiliency, self-efficacy, and performance) thus leading to engagement. On the contrary, self-undermining behaviors (e.g., poor communication, mistakes, and conflicts) added hindrance demands to already high job demands and were found to be more prevalent in those having high scores on burnout (namely, cynicism and exhaustion) (Bakker and Wang, 2020; Bakker and de Vries, 2021). Thus, work engagement is both a positive outcome and predictor of job crafting, whereas job strain (possibly leading towards burnout) is negatively associated with job crafting (Bakker and de Vries, 2021). In other words, individuals who are under stress and subsequent strain may utilize less job crafting, resulting in fewer personal resources to deal with future job demands (Bakker and de Vries, 2021; Bakker and Demerouti, 2018; Vogt et al., 2016).

A specific institution where physicians may spend their career is at an academic medical center (AMC) which are unique in the nature of their collective goals and mission within the broader healthcare community. AMCs are the center of both undergraduate and graduate medical education, with the former encompassing medical students and the latter encompassing medical residents and fellows. Further, AMCs serve the local and regional communities' medical needs, as well as clinical and scientific bench research to further medical science and better inform clinical practice. Thus, an AMC will provide patient care, medical education, and research. A small subset of the larger AMC faculty is comprised of those directors of graduate medical education programs, in other words residency program directors (PD). Broadly, PDs are tasked with the responsibility of training the next generation of practicing physicians through their

recruitment and interviewing of prospective residents, curriculum design, clinical rotation scheduling, didactic sessions, and the assurance of compliance guidelines set-forth by the Accreditation Council for Graduate Medical Education (ACGME) (De Olivera et al., 2011). Since residency PDs are charged with training the next generation of physicians, it is important to understand their well-being. In addition, the ACGME stipulates by program size (i.e., number of residents) a required minimum number of associate program directors (APDs). APDs are individuals who often assume the responsibility of curriculum and didactic session design, recruitment and selection of residents, administrative tasks, and often one-on-one precepting of residents in clinical settings. For example, by ACGME recommendations for a surgical residency program with 21-50 residents, a minimum of one APD is required, whereas there must be a minimum of two APDs if there are 51 or more residents. Thus, PDs and APDs form the nucleus of the team comprising graduate medical education at AMCs.

Numerous studies have explored well-being in PDs. Studies have demonstrated a prevalence of burnout ranging from 20-33%, using various cross-sectional quantitative questionnaires (O'Connor et al., 2018; Aggarawal et al., 2015; Psenka et al., 2020; West et al., 2013; Porter et al., 2018; De Oliveira et al., 2011). However, it is challenging to draw conclusions as various studies use differing means to assess those who meet the criteria of being burned out (Aggarwal et al., 2015; Porter et al., 2018; Anderson et al., 2000). Furthermore, no study of PDs has explored the positive psychological perspective of engagement, nor have they used qualitative data collection methods or applied a theoretical model or framework of burnout. A recent article by Psenka and colleagues (2020) explored burnout via a cross-sectional questionnaire in family medicine PDs,

looking at areas of work-life (e.g., workload, values, and control) and how these areas may influence burnout. This study demonstrated workload with insufficient time and resources was a common stressor. This was assessed using three questions on a cross-sectional survey, however the specifics of the workload demand (i.e., clinical, administrative, teaching and scholarly activity) or what specific resources were lacking was not addressed. Further, the authors did not apply the broader mediation model of burnout proposed by Maslach and Leiter which incorporates areas of work life into the model (Maslach and Leiter, 2016b).

The emergence of the novel coronavirus disease (COVID-19) has impacted how health care is delivered and changed how graduate medical education is experienced by residents, PDs and APDs. COVID-19 has impacted resident training through a decrease in elective procedures resulting in challenges meeting minimum case requirements, concerns about the health a safety of residents during director-patient contact, and a move to virtual didactic sessions (Coyan et al., 2020; Crosby et al., 2020; Rosen et al., 2020; Giordano et al., 2021; Kasle et al., 2020). This study occurred, in its entirety during the ongoing COVID-19 pandemic, with all the ebbs and flows, vicissitudes, and angst it has caused for society in general. This may have impacted directly or indirectly participant recruitment, and their overall experience, however it may have allowed the participants to rediscover values, time, and outlets they may not have appreciated prior to the current pandemic.

**Theoretical Framework**

A theory has been developed to encompass the aforementioned work conditions to include job demands, resources (job and personal), job crafting, self-undermining, job

strain (towards eventual burnout), and work engagement: Job Demands-Resources (JD-R) theory (Demerouti et al., 2001; Bakker and Demerouti, 2017). The first proposition of JD-R theory is that working conditions are identified into one of two categories: either job resources or job demands, with job demands as a predictor of exhaustion and job resources a predictor of "(dis)engagement" (Bakker and Demerouti, 2017). In addition, this theory proposes job resources buffer the effects of job demands, thus the higher the demands the more salient job resources become (Bakker and Demerouti, 2017). Furthermore, job resources have a motivational effect when job demands are high. Therefore, a combination of high demands and high resources is often referred to as an active job, thus motivating employees to learn new skills and take on challenges (Karasek, 1979; Bakker and Demerouti, 2017). In addition, JD-R theory proposes individuals are not passive participants in their work environment, instead those engaged employees proactively gain resources, and hence, engagement via job-crafting, but the same is true for those under stress as they "perceive and create more job demands overtime" via self-undermining behaviors (Bakker and Wang, 2020 pg. 242; Bakker and Demerouti, 2017). Applying JD-R theory to PDs and APDs informed how they experienced job demands in a complex work environment as physicians, all while having multiple roles and (potential) access to resources from their institution, department, team, and personal self.

Expanding on the previously stated definition of engagement proposed by Kahn (1990), when individuals experience their work context they assess the situation by asking, for example, "how meaningful is it for me to bring myself in this performance", and "how safe and available am I to do so?" Thus, how the individual unconsciously

assesses the situation via these parameters will result in how they view the psychological conditions of meaningfulness, safety, and availability. These psychological conditions shape the individual's psychological presence (i.e., the experiential state of engagement with dimensions of attentiveness, connection, integration, and focus) which will further shape personal engagement (Kahn, 1990; 1992). Influencing the three psychological conditions are tasks, roles, and work interactions (i.e., work elements); interpersonal relationships, group and intergroup dynamics, and organizational norms (i.e., social systems); and levels of energy, non-work lives, and situational factors (i.e., individual distractions) (Kahn, 1990; 1992). As such both individual and organizational factors shape rather than determine experiences and behaviors (Kahn, 1990; 1992). In addition, mediating the relationship between the three psychological conditions and psychological presence are individual differences constituting models of self-in-role, security, courage, and personal development (Kahn, 1990; 1992). Lastly, the model is recursive, in other words, individual's performance outcomes and experiences garner feedback, rewards, or punishments that therefore influence future experiences (Kahn, 1992). If the focus is on psychological presence, rather than effort (in contrast to theories regarding work members as being propelled to fulfill organizational goals through more or less effort), as Kahn (1992) states "the whole person [needs] to be taken into account in framing theory and research (pg. 342)." In order to accomplish this understanding of the "whole-person," assuming psychological presence focuses on the experiences of organizational members, "experiences are empirically documented with qualitative data that provide thick, rich, descriptions of individuals and their social systems" (Kahn, 1992; pg. 345). Thus, this underlying recursive model of psychological presence will inform the methods of data

collection, specifically through semi-structured interviews and observation in the participant's social context. (See Figure 1.1 for a representation of the recursive model of psychological presence adapted from Kahn [1990; 1992]).

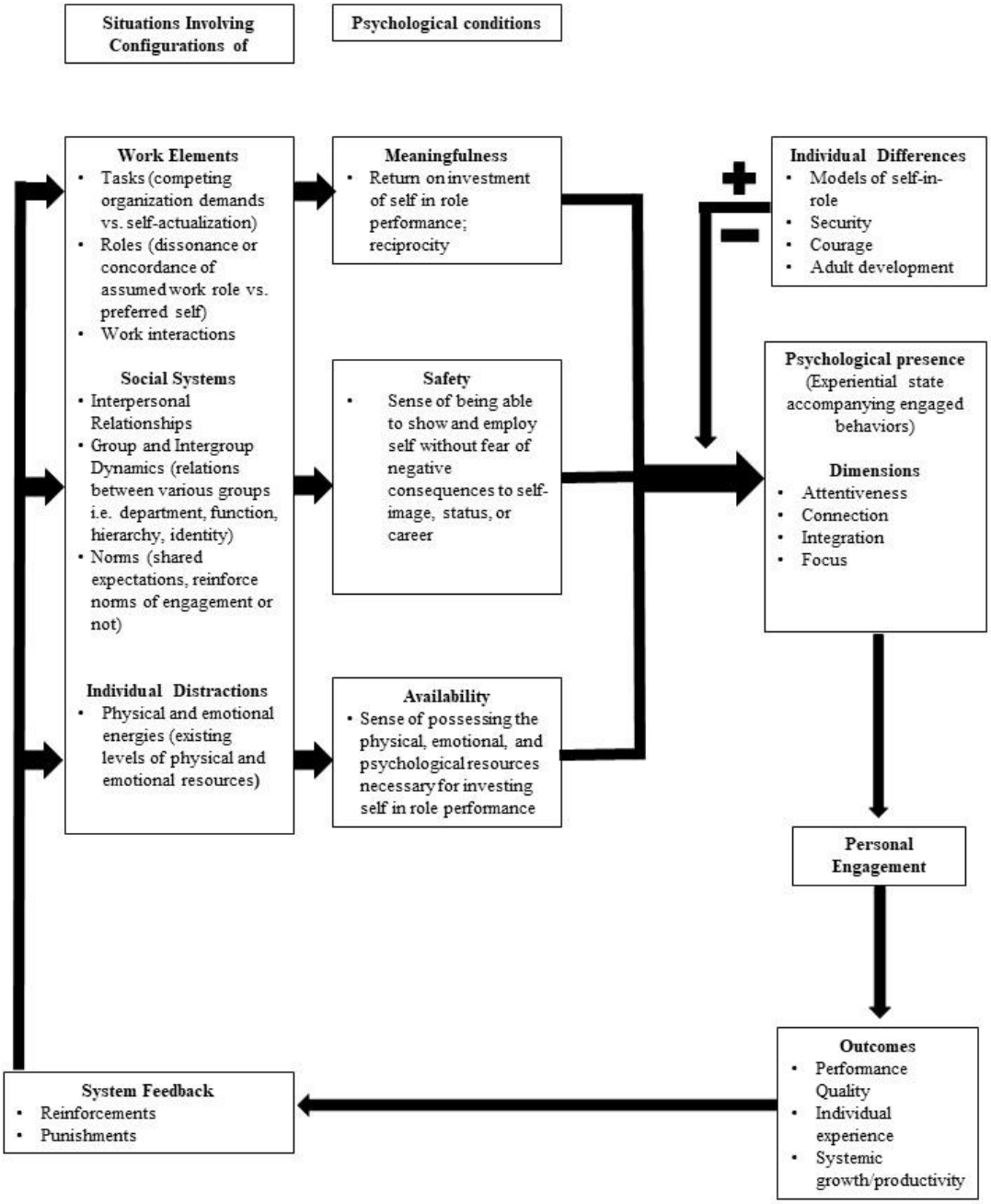
**Statement of the Problem**

Studies have demonstrated correlations, lists, prevalence, and possibilities of associations to burnout in PDs. However, how they experience burnout, or the job demands that contribute to emotional exhaustion, depersonalization, and lack of professional efficacy has yet to be fully explored. In addition, there are no studies exploring work engagement in PDs and how various aspects of their work-life allows them to find fulfillment through physical, cognitive, and emotional presence. Further, PDs and APDs navigate between various roles as educator, clinician, and administrator, thus it is important to consider how program directors express their "preferred self" in these various roles in relation to Kahn's (1990) conceptualization of personal engagement. Lastly, a few studies have explored burnout and engagement simultaneously in physicians at large, but none specifically within PDs and APDs.

In other words, the complexity of PDs and APDs lived experiences within an institution was best explored within the context of their job demands and resources. As no study has situated the experience of PDs and APDs into a theory or model of burnout and engagement, the Job Demands-Resources (JD-R) theory was applied to the data after an initial inductive approach to data analysis. JD-R theory research has demonstrated work engagement via job resources (e.g., time, colleague social support, supervisor support, opportunities for growth, performance feedback, skill variety, etc.) may mitigate the

**Figure 1.1.**

Title. Recursive model of psychological presence (adapted from Kahn, (1990; 1992)



effects of job demands (which may lead to burnout [e.g., workload, physical demanding task, lack of sleep, emotional demands, role conflicts]) as well as how individuals proactively influence and modify their working conditions (via job crafting or conversely through self-undermining behaviors). Therefore, by understanding how PDs and APDs experience job demands, resources, job crafting, or self-undermining behaviors within their social context, a more specific and directed means to provide an organizational, team, and individual road map to form a meaningful, fulfilling, connected, and flourishing career while simultaneously supporting a less exhausted and cynical individual may be realized (Van den Broeck et al., 2008; Bakker et al., 2005; Bakker and Demerouti, 2018; Wrzesniewski and Dutton, 2001).

**Purpose of the Study**

The primary purpose of this study is to explore, and provide rich descriptions of the lived experiences of PDs and APDs within institutional, personal, and societal context as they experienced engagement, fulfillment, emotional exhaustion, and depersonalization within their various roles. PDs and APDs sit at a crucial junction as directors of their respective residency programs which is a bridge between undergraduate medical education and becoming an autonomous practicing physician. Thus, they are directing the programs training the next generation of physicians. As such, it is important to understand how they experience fulfillment, well-being, and dedication within the context of their various roles. One of the guidelines as defined by the ACGME (2020 pg. 10) is "the program must demonstrate retention of the program director for a length of time adequate to maintain continuity of leadership and program stability" with a recommendation the initial appointment be at least six years. Thus, appreciating PDs'

experience may allow for future studies to develop strategies to retain PDs in their role to provide "continuity of leadership and program stability."

## Research Questions

As such, this study sought to answer the following research questions:

1. How do PDs experience their residency program administrative tasks (i.e., faculty recruitment, required accreditation documentation, recruitment and selection of residents, evaluation and promotion of residents, etc.) in relation to their career well-being, fulfillment, and dedication?
2. How do PDs experience their clinical tasks, both in the role of providing patient care as an autonomous physician and training residents during patient encounters, in relation to their career well-being, fulfillment, and dedication?
3. How do PDs experience their role(s) in an educator/scholarly activity (i.e. development and delivery of didactic sessions, one-on-one resident training in a clinical context, simulations, etc.) in relation to their well-being, fulfillment, and dedication?
4. How do PDs experience momentary emotional exhaustion, cynicism, professional efficacy, dedication, vigor, psychological affect their well-being, fulfillment, and dedication?

## Overview of Research Methodology

The rationale of exploring the complex phenomenon of both burnout and engagement, using qualitative methods, specifically using semi-structured interviews and participant observation, was to consider the organizational context and to enable the researcher to explore the participants' experience within their social system. Leiter and

Maslach (2017 pg. 56) claim “a mix of positive and negative psychological states at work seems consistent with psychological states that are responsive to events on the job” and as such studies should aim to “capture a more diverse range of profiles rather than producing a single dimension from good to bad or bad to good.” As such, the goal of this study was not to determine if the participants were burned out or not, engaged or not, but to understand how they experience various aspects of their roles, with an eye to the future for approaches to mitigate burnout and promote engagement. Overview of the Dissertation

Chapter 2 includes a review of the relevant literature for this study, historical context of the constructs of burnout and engagement, instruments used in research to measure burnout and engagement, theories of burnout and engagement, burnout and engagement in physicians in general, and specifically PDs and APDs. Chapter 3 focuses on methodology to include a description of the participants, data collection methods, and data analysis. Chapter 4 will present the results of the study, with Chapter 5 presenting the discussion, implications, study limitations, and future directions.

# CHAPTER 2: REVIEW OF THE LITERATURE

This chapter provides the context for this study investigating burnout and engagement in residency program directors (PD) and associate program directors (APD). As such, to allow for the transparency of the researcher's context and lived experience the researcher will share their positionality and lived experience. A personal experience, one that has shaped who I am, was I have experienced all of the detrimental effects of burnout, depression, depersonalization, emotional exhaustion, cynicism and, most troubling, suicidal ideations. The thought of ending my life was a better outcome than trying to go through another day of work in their role and even as a human. Admittedly, my career and work life were not the only events which led to burnout, and the adverse manifestations mentioned, but a culmination of work life and personal life. For the reader to better appreciate my positionality those personal challenges were many. First, my then 3-month old daughter was acutely ill, which required her to be on mechanical ventilation for multiple days. Watching my sweet, gently, and helpless daughter being intubated and hearing her heart stop may be one of the most heart wrenching experiences of my life, and the feeling of helplessness as a father who is supposed to protect and care for their child. Without a doubt I look back on that experience as one of those pivotal moments of my life, a before and after moment, and I am a changed person because of it, for good or bad. The images of that night will forever be entrenched into my mind's eye, with the sights, sounds, and smells associated with the experience often bring back recollections of that horrible occurrence. At the same time, my father had a brain mass removed the previous week, and had to be readmitted to the ICU as my daughter lay in the hospital. Lastly, myself had just went through a skin excision procedure and was waiting for

results to find out if they had cancer. All of this happened within a two-week period, while directing a master's program and completing my own PhD work. Needless to say, this overwhelmed their emotional compacity to handle all that was occurring.

I suppressed much of their feelings for months, until one day I thought couldn't go forth and thought about taking my own life. I recognized I needed to ask for help, and luckily, found it and are able to share my story with you all. Thus, being vulnerable saved my life. I share this experience not to state my life experiences are any more traumatic or challenging than others. I wanted to share my story, to demonstrate that by understanding a person's lived experience one can better appreciate the complexity of the human experience. Furthermore, fulling appreciating all the experiences, trials, successes, tribulations, and struggles of a participant is not obtainable, but listening, observing, and co-creating conversation hopefully adds nuance and context their experience. In addition, by sharing this it may give someone else going through struggles to know they are not alone, and it is acceptable to share stories, be vulnerable, and ask for help. Additinally, in the co-creation of knowledge throughout the research process the researcher attempted to cognizant of the biases of their experience and what they may bring to the conversation, or what the researcher may be biased in recognizing in events and discussions.

The other part of the researcher's positionality is they recognize their position as a privileged white male, fully realizing they started the race of life with many advantages and are in the position today because of barriers that were not in place preventing the researcher to pursue their chosen career path. The researcher is also a first-generation college student, and thus also the first to pursue a graduate degree in their immediate family. As such, this researcher wants to enable others less privileged to pursue their

goals and to help remove barriers blocking their path. Further, as a qualitative researcher, viewing the research paradigm through a social constructionist lens, the researcher thus views "objectivity and truth are not byproducts of individual minds but of community traditions" (Gergen, 2009 pg. 8). Through this lens, the researcher recognizes "meaning is constructed in communication, through language" and furthermore "meaning thus resides not *in* any one person, but *between* people who continually (re)negotiate it [emphasis in original]" (Ellingson, 2009 pg. 32). As the author, the choices of language are recognized as an active choice, placing the researchers' voice of explanation and description as opposed to others (Gergen, 2009). As such, the researcher attempts to beware and reflexive to the idea that "no particular language is privileged in terms of its picturing the world for what it is; innumerable accounts are possible" (Gergen, 2009 pg. 22). This idea of voice comes to the fore, as a white male researcher, being reflexive of how "Black and Brown faculty consistently face challenges being racially and ethnically diverse in institutions of higher education" an arguably as important for this researcher to be cognizant of the institutions of "[higher education] are known more for being spaces that elevate and center whiteness (power structure and ruling ideology), than being inclusive or equitable spaces" (Gnanadass, et al., pg. 62).

In conclusion, what is to follow is a review of the literature of burnout, engagement, including conceptual theories, as well as how these phenomena have been applied to physicians, residents, program directors (PDs), and others in the healthcare professions. A commonality with much of the literature surrounding burnout and engagement in healthcare professionals specifically, was the lack of context, nuance and

stories of the participants to better appreciate their lives in the various studies, thus in turn providing an understanding of the complex phenomenon of burnout and engagement.

**History of Burnout**

To gain insight into the history of burnout, the conceptualization often starts with Freudenberger with his work as a counselor in a New York City Free Clinic (1974). Freudenberger (1974) noticed himself and other staff members demonstrating physical signs, of exhaustion, fatigue, gastrointestinal disturbances, sleeplessness, irritability, inability to control emotions, and even the use of drugs to "relax." Freudenberger goes on to describe cognitive impairment, where the individual experiencing burnout is resistant to change and becomes inflexible. In Freudenberger's (1974) opinion, the dedicated and committed are those who are at greatest risk of burnout, as well as those who "work too much, too long and intensely." Finally, Freudenberger (1974 pg. 163) describes what they saw as ways in preventing or ways to help burnout once established: ensuring a variety of work tasks, allowing time to recover by limiting work hours, creating a supportive network of coworkers by "let[ting] the members of your group take time off just because they want a night or a few days for themselves", engaging in learning experiences, and getting physical exercise. Remarkably, Freudenberger (1974) thought it unwise for the burnt-out person to have introspection such as meditation or yoga.

Freudenberger (1974 pg. 165) states: "In sum, we cannot prevent burn-out, but we can certainly help to avoid it as much as possible and when it does happen to one of us, to admit it, ask others for help and take some time off for ourselves." Since this initial description of burnout, nearly 80,000 publications have since been devoted to the phenomenon (Schaufeli et al., 2020). One cannot help but wonder if modern society,

specifically modern medicine, with constant connectivity, lack of time for exercise, overwork, inability to get away or use proper vacation has led to the increased prevalence and pervasive discussion surrounding burnout. Nevertheless, the conversation continued to evolve. The next major contributor to the understanding of burnout, Christina Maslach and the development of the Maslach Burnout Inventory (MBI), was occurring simultaneously and independent of Freudenberger, yet on the opposite coast of the United States.

First, to place the development and recognition of burnout into context, and to appreciate why the 1970s, and even into the 21st century, there has been an increased interest, discourse and research surrounding the phenomenon of burnout, one needs to appreciate the political climate, occupational evolution, and culture milieu of the period. Schaufeli and colleagues (2009) discuss some of the developments, with a caveat: the social, cultural, and economic aspect are speculative, and not empirically derived; however, it does provide context as to why burnout was first described in certain professions. The first development was tied to both Presidents Kennedy and Johnson, with the former initiating a call to public service and the latter applying it to the "War on Poverty" (Schaufeli et al., 2009). This calling put many idealistic, younger Americans into the human services, but soon many became disillusioned as their efforts bore little fruit as they ran into the systemic nature of the issue of poverty. Schaufeli and colleagues (2009) conclude this reduced performance and lack of compassion, was not merely a side effect of the chosen occupation "but a devastating attack on their professional identity" (pg. 207). It may be no coincidence that the first studies in burnout were those in the

human services profession as seen with Freudenberger working in Free Clinics and with Maslach interviewing a variety of human service occupations.

Following World War II, human service workers were made up of predominantly small-scale, local groups who "considered their work as a calling" and, were subsequently bureaucratized and made into professions (Schaufeli et al., 2009). For example, burnout was reported as being virtually absent in "monasteries, Montessori schools, and religious care centers," as the authors call "ideological communities," where the values between the organization and individual are congruent (Cherniss and Krantz, 1983). The authors argue these groups share values, sense of community, commitment, and as such, burnout may be the result of professionalization of the once classic "helping professions" from a calling to an occupation. In addition, it has been demonstrated that physicians who experience burnout are less likely to see practice of medicine as a calling (Jager et al., 2017; Shanafelt et al., 2017). Furthermore, values, or more precisely when the individual's core values do not align with the organization or institution's values, an incongruence occurs. This incongruence of values has been empirically investigated and incorporated into two models of burnout: a mediation model of burnout proposed by Leiter and Maslach (2005; 2016) and a structural model of burnout by Leiter, Gascon, and Martinez-Jarreta (2010).

In the United States during the 1960s, prior to the initial description of burnout, a cultural shift challenged the authority and power of professionals such as nurses, physicians, police officers, and other human services workers (Schaufeli et al., 2009). With a shift in power, this provided the recipient, (e.g., the patient in medicine) the empowerment to demand more from the health professions workforce. This further

manifested into a lack of "equality of one's perceived investments in and benefits from an exchange relationship" (Schaufeli, 2006, pg. 81) or reciprocity between professional and recipient, professional and organization, and professional and colleagues (Cherniss and Krantz, 1983). A lack of reciprocity or social exchange manifests as withdrawal from each of those relationships, and specifically, a lack of reciprocity between recipient and professional manifests into all three dimensions of burnout, i.e. emotional exhaustion, depersonalization, and personal accomplishment (Schaufeli et al., 2009; Schaufeli, 2006).

The last development, although not specific to occupations in the human services, but society at large, was the post-World War II gradual shift away from classic social communities of the "church, neighborhoods, and family" (Schaufeli et al., 2009, pg. 207). This has led to what some argue as a lack of community support and an increase in individualization (Schaufeli et al., 2009; Farber, 1983). Furthermore, there is an argument that as individualism has prospered in combination with a decrease in community support, this has combined to produce individuals who demand instant gratification from their work. As Farber (1983 pg. 11) highlights, "these two trends [have] produced workers with higher expectations of fulfillment and fewer resources to cope with frustrations – a perfect recipe for burnout." Generally, as the interest in burnout has moved to other regions of the world, it roughly follows the subsequent economic development of the country, much as the economic development occurred in the United States post-World War II (Schaufeli et al., 2009). Incongruence of values and an imbalance between job demands and resources continue to be the focus of the discourse and research surrounding burnout, almost 50 years since its initial description.

### *Maslach and the Maslach Burnout Inventory (MBI)*

Maslach, as a social psychological researcher, began to appreciate a state of emotional exhaustion, along with a negative perception of patients, and termed it "burnout" (Maslach, 1976; Maslach and Pines, 1977; Maslach and Jackson, 1981; Schaufeli et al., 2009). Interestingly, Maslach (1977) noticed the paradox Lief and Fox (1963) describe in medical professions as the distancing of oneself to provide optimal care, or "detached concern" to be protective mechanism at first, but may manifest into dehumanization. As they continued conducting research, Maslach appreciated an emergence of the aforementioned attributes through interviews, questionnaires and observations as a possible syndrome of burnout, and to assess this syndrome the Maslach Burnout Inventory (MBI) was developed (Maslach and Jackson, 1981). The preliminary MBI, containing 47 items, was administered to multiple human and service occupations to obtain the initial data. The data were used in a series of factor analyses to produce the final version containing 22 items constituting three subscales: emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach and Jackson, 1981; Maslach et al., 1997).

The exhaustion subscale is defined as the feeling of being used up, overextended, fatigued, loss of energy without being able to replenish, and not able to expend further cognitive effort (Maslach and Leiter, 2016a). Using Maslach's conceptualization of burnout, depersonalization usually occurs as a consequence of emotional exhaustion, being protective at first by creating a buffer, through withdrawing, distancing, and having a hostile view of patients (Maslach and Leiter, 2016a). Reduced personal

accomplishment (professional efficacy), is the feeling of decline in competence and productivity at work (Maslach and Leiter, 2016a).

Originally, the MBI was developed to be used in those providing human services, thus researchers wanting to explore occupations without direct personal contact needed items situated in a more general context. As such, an MBI General Survey (MBI-GS) was developed and the original was designated MBI Human Services Survey (MBI-HSS) (Maslach et al., 1997). The definition of burnout with the MBI-GS was refined, "as a crisis in one's relation with work, not necessarily as a crisis in one's relationships with people at work" (Maslach et al., 1997, pg. 208). Items within the subscales were modified to remove people or client to a more general context of work. In line with this modification, depersonalization as it relates to human service work was replaced by cynicism, thus demonstrating a distance or indifference to work, not specifically to people or patients (Maslach et al., 1997).

Assumptions of the MBI are first that it is a multidimensional model of burnout, as compared to other instruments that may for example only address the exhaustion component of burnout (Maslach et al., 1997; Schaufeli et al., 2020). Thus, "the scores for each subscale are considered separately and not combined into a single total score" (Maslach et al., 1997, pg. 194). Secondly, the "stress experience" or the emotional exhaustion component is "embedded in a context of complex social relationships," and by only evaluating exhaustion it ignores reflection of self and the relationship with patients and coworkers (Maslach et al., 1997). Lastly, the MBI was designed to measure an enduring state of burnout, and as part of the development test-retest reliability was conducted to ensure this was consistent across time. A cohort of social welfare and

administrators in health agency were administered the MBI at 2- to 4-week intervals the reliability coefficients of 0.60 for depersonalization, 0.80 for personal accomplishment, 0.82 for emotional exhaustion; all subscales were significant at p=0.001. In a separate cohort of 248 teachers, two test sessions were separated by 1-year with reliability coefficients 0.54 for depersonalization, 0.57 for personal accomplishment, and 0.60 for emotional exhaustion, with no stated p-value (Maslach et al., 1997). Thus, with no p-value provided the one-year test-retest reliability is not significant, further supporting the argument burnout scales, as constructed, may not be sensitive to change over time. Furthermore, in an early study using the MBI as an instrument measuring burnout, Jackson and colleagues (1986) concluded "a pessimist might predict that burnout researchers will travel the familiar and well-worn paths blazed by their forefathers in stress research, the result being that twenty years from now we will have more data but not much more knowledge" (pg. 637). They continue "neither the theoretical nor practical utility of this new approach to understanding job attitudes has been conclusively demonstrated…" and "instead, the unique aspects of the burnout syndrome should be emphasized" (Jackson et al., 1986 pg. 639). This raises the question whereas this pessimistic view played out over the subsequent twenty years. As with any instrument there are limitations. First, conceptualizing burnout as an enduring state with stability over time does not allow for minor fluctuations in burnout to be assessed, thus in longitudinal studies slight variations may not be meaningful or trends may be challenging to detect. As recently as 2021, an article by Bakker and de Vries describe the continuing debate on the length of time needed to establish enduring burnout; is it weeks, months, or years? With most burnout research utilizing cross-sectional design, this has been a

hindrance in understanding the evolution of burnout.Additionally, in administrating the MBI, Maslach and colleagues (1997) state “respondents must be unaware that the MBI is a burnout measure” and “they must not be sensitized to the general issue of burnout” so as to not to cause a reactive effect of the respondent. However, this may be problematic as, 1) one of the items states “I feel burned out from my work”, directly stating the concept of burnout, and 2) if respondents have been given the survey at multiple points in time, the respondent will be keen it is assessing burnout (Maslach et al., 1997).

Further, scoring, and thus indicating whether respondents meet the criteria of burnout, has been problematic since scoring of the MBI does not allow for a single “burnout score” or burnout index, but is scored as separate constituent aspects of burnout in subscales (i.e. emotional exhaustion, depersonalization, and personal accomplishment). This has been a source of confusion, when discussing who is burned out or not, as the MBI “cannot be used in individual diagnosis because there is no solid basis on which to identify meaningful cutoff scores” (Maslach et al., 1997, pg. 214). The reason for this is the MBI as well as other research measures of burnout produce continuous scores, but this runs counter to the goal of epidemiological publications (i.e., literature of physician burnout) where proportions of burnout “cases” are identified (i.e., prevalence and incidence rates) (Maslach et al., 2008). This has resulted in two ways to score the MBI; the first, a continuous scoring approach using a normative sample from the MBI Manual and dividing each of the three domains into thirds: “low,” “medium,” and “high.” The second, dichotomous scoring where individuals are considered meeting criteria of burnout if scoring “high” on exhaustion plus in combination with a “high” score on either of the two remaining dimensions (in the Netherlands dichotomous scoring is used as a

diagnostic criterion but not in the United States) (Maslach et al., 2008). Furthermore, there is debate over the validity of the factorial structure of the MBI (Schaufeli et al., 2020; Schaufeli and Taris, 2005). De Beer and Bianchi (2019) performed structural equation modeling and Bayesian structural equation modeling that demonstrated the best fit with a two-factor model, where emotional exhaustion plus depersonalization are one factor, and personal accomplishment is a divergent factor. It is estimated that 88% of burnout studies employ the MBI with heterogenous operationalization and inconsistent scoring, thus leading to challenges in assessing between-study comparison as well as diagnostic value (Schaufeli et al., 2020; de Beer and Bianci, 2019).

**Engagement**

In understanding, studying, and researching human mental health, the field of psychology has been largely based on the disease or illness model. This is demonstrated in a search of psychology abstract publications from 1887-2000 which reveals a 14:1 ratio of negative emotions to positive emotions, as well as 7:1 ratio of treatment exceeding prevention (Meyers, 2000). As such, grant funding has been in the support of research on psychological pathology, with many resultant benefits, as disorders once intractable can now be cured or appropriately managed (Seligman and Csikszentmihalyi, 2000). This has enabled a paradigm of treating mental illness "by repairing damage: damaged habits, damaged drives, damaged childhoods, and damaged brains" or disease, damage, disorder, and disability (Seligman and Csikszentmihalyi, 2000; Perreira et al., 2018). The recognition of the original intent of the profession of psychology was built around three missions: "curing mental illness, making lives of people more productive and fulfilling, and identifying and nurturing high talent" (Seligman and Csikszentmihalyi,

2000, pg. 6). Seligman and Csikszentmihalyi in their introduction of Positive Psychology, state curing mental illness has by far exceeded the latter two missions, and Positive Psychology aims to bring "the focus of psychology from preoccupation only with repairing the worst things in life to also building positive qualities" (2000, pg. 5).

Responding to this calling for a positive framing of psychology, researchers exploring the phenomenon of burnout turned to the positive antipode, engagement. Kahn is often credited with being the first to explore engagement, building upon the idea of connecting of oneself to their work role as "people employ and express themselves physically, cognitively, or emotionally during role performances" (1990 pg. 694). At the opposite end of the spectrum, Kahn (1990) defined disengagement as the withdrawal of self, while becoming defensive physically, cognitively, and emotionally. To investigate engagement and disengagement, Kahn (1990) employed direct observation and interviews, which are unique, in both engagement and burnout literature. This allowed Kahn to focus "on people's experiences of themselves, their work, and its contexts" (1990 pg. 695). Kahn (1992) elaborates further, "the whole person" needs to be considered, to appreciate the "complexity of people at work." As the psychological experience shapes attitudes and behaviors, behaviors in turn shape experience, with experiences shaped by "individual, interpersonal, group, intergroup, and organizational factors" (Kahn, 1990, pg. 695). As such, Kahn was a proponent for collaboration of participants in the research process itself, "such that they collaborate in that process of uncovering and examining their experiences and behaviors" (1992 pg. 344) through the use of case studies and qualitative data. Interestingly, as engagement research has progressed, as with burnout research, there has been a shift away from in-depth

participant collaboration and qualitative data to more cross-sectional quantitative data collection (Cole et al., 2012).

As well-being was further explored from a positive psychological perspective, two competing constructs of engagement were defined. The first was proposed by Maslach and Leiter (1997) and Maslach and colleagues (2001) where burnout was rephrased as an erosion of engagement, which was direct opposite of burnout, thus defining engagement as energy, involvement, and efficacy. Importantly, engagement defined as such allows for the MBI to be used to measure engagement, by employing the opposite scores (i.e., low emotional exhaustion, low cynicism, and high efficacy). Maslach and Leiter (1997) demonstrated this by a study exploring nurses in two different hospital units, where those meeting burnout as defined by the MBI (i.e., high scores on exhaustion and cynicism and low on efficacy), scored unfavorable on Areas of Work-life Scale (AWS), scoring < 3.0 on each subscale on domains of work life (i.e., workload, control, reward, community, fairness, and values). Those defined as engaged via the MBI (i.e., low emotional exhaustion, low cynicism, and high efficacy) scored favorable (>3.0 on subscales) on the AWS. However, not all agreed with this definition and conceptualization of engagement, and by extension the use of the same instrument to assess both engagement and burnout (Schaufeli, Salanova et al., 2002; Schaufeli, Martinez et al., 2002; Schaufeli and Bakker, 2004).

A second construct of engagement was proposed by Schaufeli, Salanova and colleagues (2002), Schaufeli, Martinez and colleagues (2002), and Schaufeli and Bakker (2004) which conceptualized it as an independent state, albeit negatively correlated with burnout. As such they defined engagement as “a positive, fulfilling, work-related state of

mind that is characterized by vigor, dedication and absorption" (Schaufeli, Salanova et al., 2002, pg. 74). Furthering the definition, vigor is demonstrated through high levels of energy, and the persistence through work challenges via mental resilience (Schaufeli, Salanova et al., 2002). Dedication is the sense of "significance, enthusiasm, inspiration, pride and challenge" and absorption defined as the feeling of immersion and total concentration in the task, to the extent one may lose track of time, and not want to detach from the task at hand (Schaufeli, Salanova, et al., 2002 pg. 74).

The rationale for considering burnout and engagement as two separate constructs arises from a study by Schaufeli, Salanova, and colleagues (2002) that simultaneously assessed the factorial structure of the MBI along with a new instrument designed to assess engagement. Originally, two different models were tested using structural equation modeling (SEM) to assess the relationship between burnout and engagement scales. Model 1 assumed all scales of burnout and engagement would load on to one latent factor (i.e. well-being) whereas; model 2 assumed the three burnout scales would load onto a burnout factor, and the three engagement on the engagement factor (Schaufeli, Martinez, et al., 2002). Model 2 was shown to have a significantly better fit than model 1, thus demonstrating the one-general factor of "well-being" as insufficient to measure burnout and engagement (Schaufeli, Martinez, et al., 2002). Interestingly, a third model had the best fit, assuming two "core" burnout scales, emotional exhaustion and cynicism, and the three engagement scales plus the professional efficacy from the MBI (Schaufeli, Martinez et al., 2002). Additional support, for considering burnout and engagement as separate, non-redundant concepts is presented in a study exploring momentary needs satisfaction while controlling for levels of enduring burnout and engagement (Bakker and Oerlemans,

2016). Bakker and Oerlemans demonstrated a low score on burnout do not necessarily mean someone is engaged nor someone low on engagement is burned-out, only they are "not full of energy and not dedicated to work" (2016 pg. 772). Arising from the aforementioned studies by Schaufeli, Salanova and colleagues (2002) and Schaufeli, Martinez and colleagues (2002) is the factorial validity of the Utrecht Work Engagement Scale (UWES) in assessing engagement and has become the most prevalent instrument utilized (Cole et al., 2012). The UWES is a self-report instrument including three subscales, vigor (6 items), dedication (5 items), and absorption (6 items), with all items written from the positive perspective (Schaufeli, Salanova et al., 2002; Schaufeli, Martinez, et al., 2002b; Schaufeli and Bakker, 2004).

To further investigate the relationship between burnout and engagement, Cole and colleagues (2012) sought to explore the ambiguity and lack of consensus surrounding the conceptualization and the constructs. A main goal of the study was to explore if burnout and engagement, as measured by the MBI and UWES, were redundant constructs. Using a meta-analytical approach, the authors concluded when using the UWES and MBI, there is redundancy in the constructs. Cole and colleagues (2012) recommend using the original more encompassing definition of engagement as proposed by Kahn (1990), to alleviate the construct overlap with burnout, in addition to performing more longitudinal studies.

In response to Cole and colleagues (2012), a dialectical perspective of burnout and engagement was proposed by Leon and colleagues (2015). Briefly, dialectics is centered around contradictions in dynamic relationships and the unique outcomes that result from interactions of the two constructs, and how they are acting on the other (Leon

et al., 2015). In applying dialectics to burnout and engagement, these two states are constantly at work against one another to create a changing state of the individual, and at any one time one may be dominated by the other (Leon et al., 2015; Sonnentag et al., 2010). Furthermore, the opposing ends of a dialectic relationship are usually described as being negatively related, as with burnout and engagement. Dialectics allow for further explorations of contradictions in this inherently negative relationship, in that an absence of one does not mean the presence of the other (Leon et al. 2015). As such, burnout may not be present but does not imply engagement takes its place, and the absence of engagement does not imply burnout in the individual. In order to capture burnout and engagement in a dialectical framework, Leon and colleagues suggest research should be conducted by exploring the phenomenon simultaneously, while employing data collection via "interviews, observations, diaries, or other methods to further determine how two constructs interact when simultaneously present" (2015, pg. 94). Furthermore, Leiter and Maslach state future exploration of the phenomenon "may not come from presence or absence of a specific state, but from considering a range of possible psychological connections" (2017 pg. 56).

Both Bakker and colleagues (2008) and Rich and colleagues (2010) using differing conceptualizations of engagement demonstrated the promotion of engagement within institutional or organizational members may result in better overall performance. Specifically, via positive emotions, better psychological and physical health, and self-created personal resources (i.e., self-efficacy, optimism, and resilience), engagement may not only benefit themselves but positively affect their colleagues (Bakker et al., 2008). The latter was demonstrated by those individuals experiencing engagement in a team,

their team members reported being more engaged, with burnout having the same "crossover effect" (Bakker, et al., 2006). In addition, Rich and colleagues (2010) and Halbesleben and Wheeler (2008) demonstrated employees with higher levels of engagement positively contributed to their organizations through increased task performance and organizational citizenship behavior. Where task performance is defined as "those activities that are directly involved in a core job task" and organizational citizenship behavior are defined as less formal behaviors as demonstrated through "helpfulness, sportsmanship, conscientiousness, and civic virtue" (Rich et al., 2010 pg 617). Further, engagement has been demonstrated to impact physical health, via a reciprocal process as those engaged partake in more leisure activities, with leisure activities containing a restorative function (recovery) to feel more engaged the following day, which may even promote heart health (ten Brummelhuis and Bakker, 2012; Seppala et al., 2012; Sonnentag and Fritz, 2007). In other words, by understanding how stakeholders experience engagement and disengagement, further studies can design interventions to promote engagement at the organization-, team-, and individual-levels.

**Theories/Models of Burnout and Engagement**

As research of burnout and engagement have proliferated, various models and theories have been proposed to illustrate and appreciate the complexity of the phenomenon, and aid in better strategies to prevent burnout and build engaging environments. Furthermore, theorizing has led to the appreciation of personal characteristics and how those characteristics interact with the work environment, or as Maslach and colleagues (2001) describe, "the person within context." This led Maslach and Leiter to conceptualize and formulate a model with a main proposition being the

congruence or incongruence between the person and six work-life domains termed the mediation model of job burnout (Maslach et al., 2001; Leiter and Maslach, 2005; Maslach and Leiter, 2016; Leiter et al., 2010). This model viewed through complex relationships (i.e., the individual in the complex work context) allowed for a better reflection and appreciation for "how people make sense of their work experience" as an alternative to lists of demographic and organization characteristics (Leiter and Maslach, 2005). The six domains described are: control, workload, reward, community, fairness, and values, with values and control being the central mediating factors (Maslach et al., 2001; Leiter et al., 2010). Specifically, the evaluation between individual values and organizational values will determine if the individual experiences burnout which manifests as either an incongruence or "crisis" between those values or a positive energizing experience if those values align (Leiter et al., 2010). The concept of "values" endorsed by Leiter and colleagues, (2010) and Cherniss and Kranz (1983) was described previously in the context of monasteries and may manifest as individual concessions between the "work they want to do and work they have to do." For example, some physicians may view the electronic medical record (EMR) as something they have to do in order to be a physician. If spending time with a patient and establishing a connection is a personal value, this may run into conflict with the value of the organization of having EMR charts completed within in a given timeframe to facilitate proper billing reimbursement. Further, without using a burnout model, a similar concept is described by Shanafelt and colleagues (2009) as "lack of career fit" and is defined as physicians in academic medicine spending less than 20% of time with the most meaningful activity.

This discrepancy demonstrates an example of the lack of conceptual frameworks utilized in physician burnout research.

Another theory developed for investigating employee well-being is the job demands-resources (JD-R) theory first formulated by Demerouti and colleagues (2001). This theory considers burnout and engagement in occupations other than human services, where burnout was originally formulated using the MBI. JD-R theory is influenced by many other theories, some of which are the job characteristics theory (Hackman and Oldham, 1976), the demands-control model (Karasek, 1979), conservation of resources (COR) theory (Hobfoll, 1989), and the effort reward imbalance model (Siegrist, 1996). As such, the JD-R theory includes two sets of working conditions, job demands and job resources, and encompasses various relationships reported in the literature between job characteristics with exhaustion and depersonalization, thus making it a parsimonious model regardless of occupational group (Demerouti et al., 2001; Bakker and Demerouti, 2014; Hakanen and Roodt, 2010). Job demands are "those physical, social, or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs" (Demerouti et al., 2001, pg. 501). As such, as work demands increase and become unattainable, employees start to demonstrate exhaustion. Job demands have further been described and categorized into hindrance and challenge demands (Bakker and Demerouti, 2017; Cavanaugh et al. 2000; McCauley et al., 1994; Podsakoff et al., 2007), where the former is constructed as excesses or undesired constraints which undermine the ability to achieve goals, and the latter still contain costs; however, costs are associated with a motivational component in achieving personal growth (Cavanaugh et al., 2000; McCauley et al., 1994;

Podsakoff et al., 2007; Bakker and Sanz-Vergel 2013). The other category, job resources "refer to the physical, psychological, social, or organizational aspects of their job that help achieve work goals, and encourage personal growth and development" (Bakker and de Vries, 2021, pg. 3). When resources are lacking, work loses meaning and the basic psychological needs of autonomy, relatedness, and competence go unfulfilled. If present, resources can buffer the demands that often lead to burnout and instead promote engagement (Bakker and de Vries, 2021; Xanthopoulou et al., 2007; Hakanen et al., 2005).

As the JD-R theory evolved, personal resources were recognized and theorized to have a positive effect on work engagement. Personal resources are defined as "those beliefs people hold regarding how much control they have over their environment (Bakker and Demerouti, 2017 pg. 275). Further, emotional intelligence, a personal resource that includes empathy, has been demonstrated in healthcare workers to improve oncology patient's quality of life and effects how healthcare providers experience stressful patient encounters (Le et al., 2018; Neumann et al., 2007; Pearlman and Mac Ian, 1995; Pekaar et al., 2018a, b). This demonstrates how persons are active agents in their environments and how their various personal resources may affect their encounters with stressing events. Furthermore, Xanthopoulou and colleagues (2013) demonstrated self-efficacy (personal resource) and engagement are strongly positive when emotional demands are high. "In other words, employees use their resource reservoir (i.e., self-efficacy) to control their environment and become engaged" and importantly this demonstrates "self-efficacious employees perceive high emotional demands and

dissonance as challenges" (Sonnentag et al., 2013 pg. 82). Thus, individuals can actively use their resource reservoir to deal with demands.

Since the first conceptualization, JD-R theory has expanded to not only investigate what is wrong or damaged, but to investigate the set of conditions in which individuals excel (Bakker and Demerouti, 2017). JD-R theory has two processes at play: 1) a motivational process (i.e. provide meaning and to satisfy basic psychological needs), and 2) health impairment process where daily workload transforms into chronic overload and subsequent chronic exhaustion with physical health problems (Bakker at al., 2003). In addition, employees do not merely react to their work environments (research in occupational health followed the paradigm of stimulus-response, assuming the participant to be passive). JD-R theory proposes individuals proactively influence job characteristics by optimizing job demands and job resources through job crafting (Bakker and de Vries, 2021; Tims et al., 2013; Wrzesniewski and Dutton, 2001; Berg et al., 2010; Gordon et al., 2018). It is theorized the motivation underlying the need to engage in job crafting is the desire not to be alienated from their career, or to not experience a lack of control or agency in their work (Rogers, 1995). Furthermore, a bi-directional process is proposed as such: those flourishing or experiencing work engagement utilize job crafting, while those experiencing stressors self-undermine their work performance (Bakker and de Vries, 2021; Vogt et al., 2016; Bakker and Demerouti, 2018; Bakker and Wang, 2020; Bakker and Costa, 2014), setting in motion a "loss cycle" or a "gain cycle" (Bakker and Demerouti, 2017). A "loss cycle" via self-undermining, manifests as resource loss and begets more stress with further resource loss. Bakker and colleagues demonstrated in a recent study that participants engaged in self-undermining behaviors when experiencing

chronic burnout, as defined in this study as "indicating serious job strain problems at the individual level" (2022 pg. 2). The opposite is true for a "gain spiral," as resources are gained through initiative (i.e., job crafting), which in turn predicts work engagement and more resources gained (Bakker and Demerouti, 2017; Salanova et a., 2010). Falling under the umbrella of what Bakker and de Vries (2021) term "adaptive self-regulation," along with job crafting are recovery activities that enable persons to recover from job stress via "relaxation or psychological distance from job-related issues" (Sonnentag and Fritz, 2007 pg. 204). In the context the JD-R theory, successful strategies to mitigate burnout must focus on specific job demands and resources at both the organizational and individual level to see the largest effect. Individual-level, personalized approaches will enable one to address how the individual experiences their own unique set of demands, resources, temporal experience, and crafting strategies (Bakker and de Vries, 2021). This echoes Kumar's (2016) suggestion for the adoption of a comprehensive intervention strategy encompassing both the individual and organization.

Furthermore, job resources intersect and are supported by other psychological theories providing evidence for resources as sources of psychological well-being. The first is conservation of resources (COR) theory in which basic tenet is "individuals strive to obtain, retain, foster, and protect those things they centrally value" and stress occurs when central or key resources are threatened, lost, or failure to gain key resources is thwarted after significant effort (Hobfoll et al., 2018, pg. 106). Applying this to engagement and burnout via JD-R theory, it is postulated since there is a positive association between job demands and burnout, and resources and engagement, job resources may have a stronger effect when job demands are high (Bakker et al., 2005;

Hakanen and Roodt, 2010; Bakker and de Vries, 2021; Bakker et al., 2007). In addition, and as previously mentioned, job resources are proposed to fulfill basic psychological needs of autonomy, relatedness, and competence (Bakker et al., 2014; Ryan and Deci, 2000; Baumeister and Leary, 1995). Fulfillment of these basic psychological needs is where JD-R theory intersects with self-determination theory (SDT) (Ryan and Deci, 2000). Ryan and Deci (2000 pg. 68) propose those three basic needs "appear to be essential for facilitating optimal functioning of the natural propensities for growth and integration, as well as for constructive social development and personal well-being." In other words, if job resources facilitate fulfillment of basic psychological needs including a need to obtain and retain job resources, this implies job resources are salient within JD-R theory in understanding how an individual utilizes personal and organizational resources to engage and be psychologically fulfilled. Furthermore, van den Broeck and colleagues, (2008) demonstrated psychological needs satisfaction as defined by SDT helps explain the relationship between the health-impairing (energy depleting process of JD-R theory) and the health-enhancing (motivational process of JD-R theory) job characteristics which lead to either burnout or engagement. More recently, Bakker and Oerlemans (2019) in a study of "Dutch employees" (educational, healthcare, science, consultants) demonstrated that by proactively influencing their work environment via job crafting, individuals influenced their own engagement. This was observed on days individuals sought social support, feedback, growth opportunities (e.g. job resources), they increased their work engagement, and "determined themselves" to satisfy their basic psychological needs (e.g., SDT) (Bakker and Oerlemans, 2019).

COR and JD-R theory have been utilized in the context of analyzing and discussing physician well-being. Utilizing COR theory, Zwack and Schweitzer (2013) asked a relevant question about how physicians who are not burned out achieve their resilience. Framing their conclusion in COR theory, the authors concluded burnout is a continuous process of resource depletion, and maintaining a pool of resources through social resources, colleague support, active non-work-related interests, and feedback will allow for coping and prevention of burnout (Zwack and Schweitzer, 2013). In addition, JD-R theory has been applied to understanding physician emotional exhaustion and how job resources mitigate the impact of job demands in healthcare professionals during the COVID-19 pandemic, as well as exploring surgeon engagement (Barello et al., 2020; Mache et al., 2014). Barello and colleagues, (2020) found as with similar applications JD-R theory in non-healthcare settings where job demands led to emotional exhaustion and job resources (specifically personal resources) showed a protective factor. This demonstrates the utility JD-R theory in the healthcare setting to better elucidate how resources in specific settings may mitigate the impacts of job demands.

## Burnout and Engagement in Healthcare

### *Burnout in Healthcare*

Over the past 20 plus years, there has been a recognition and discourse involving burnout by the medical community, resulting in 182 publications on the prevalence of physician burnout between 1991 and 2018 (Rotenstein et al., 2018). During the same time period, the landscape of the US health care delivery system has witnessed numerous changes to include: narrowing of insurance networks, increasing financial pressures, utilization of electronic health records (EHR), increased workloads, and reduced

physician autonomy (Shanafelt et al., 2017). Notably, physician burnout is twice as prevalent when compared with US workers in other fields even when adjusting for age, sex, relationship status, and level of education, as well as less satisfaction with work-life integration compared with US working population (Shanafelt et al., 2015; Shanafelt et al., 2019). Moreover, Shanafelt and colleagues (2015) found a 9% increase in level of burnout among physicians (American Medical Association Physician Masterfile containing 83,291 physicians) between a 2011 and 2014. However, when in the survey was distributed in 2017 the prevalence returned to 2011 levels (Shanafelt et al., 2019). Despite this, Shanafelt and colleagues (2019) reported an increase in positive depression screening at 41.7%, which is an increase from prior studies. A limitation to the studies conducted by Shanafelt and colleagues is their anonymous nature, as such they are "unable to assess changes in burnout and WLI [Work-Life Integration] of individual physicians over time…" (Shanafelt et al., 2019, pg. 1692). Thus, this brings into question response bias, true nature of change in prevalence, and survivor bias, as those who were previously burned out may no longer be in the population surveyed.

Several studies have shown those who experience burnout also have a co-occurrence of impaired health with an increase in alcohol use disorder and suicidal ideation (Oreskovich et al., 2015; Dyrbye et al., 2008; Shanafelt et al., 2011). Studies have demonstrated a modestly higher suicide rate in male physicians to a significantly higher rate in female physicians when compared to the general public (Schernhammer and Colditz, 2004; Gold et al., 2013). A study performed by Gold and colleagues (2013) analyzed data from the National Violent Death Reporting System (NVRDS), which found physician suicide victims to be substantially different than non-physician suicide victims,

with the largest difference being the physician is much more likely to have a job problem contribute (OR:3.12, CI:2.10-4.63, P<.0005), coded from the NVRDS as experiencing a problem at work, for example, “tensions with a coworker, poor performance reviews, increased pressure, feared layoff” (Gold et al., 2013). A study of Swiss primary care physicians demonstrated a linear relationship between mental health and emotional exhaustion where those with lower work-related satisfaction had lower mental health scores and higher emotional exhaustion (Bovier, et al., 2009). Thus, as stated in the Gold and colleagues’ study “burnout, physician stress, and workplace satisfaction are important areas for future research to improve physician well-being” (2013 pg. 48).

With an abundance of discourse surrounding physician well-being, there is concomitant discourse as how to develop interventions to mitigate and prevent burnout. For example, Kumar (2016) proposed three levels of change in order to reduce the risk of burnout: 1) modifying the organizational structure to improve work culture, 2) improving fit between physicians and their roles, and 3) promoting individual-level actions to reduce stress and poor health. The goal of the above intervention is to promote higher levels of engagement in physicians, and thus prevent burnout. Additionally, it is important to determine whether interventions provided to physicians are efficacious once burnout has developed. To date, anecdotal reports have discussed the effectiveness of these strategies but there is a shortage of well-designed studies (Kumar, 2016).

Personality traits and life circumstances may also dictate those who experience burnout and those who do not; as not all individuals exposed to high stress environments develop burnout. A meta-analysis of interventions to reduce burnout demonstrated both personal and organizational interventions to be beneficial, specifically organizational

interventions addressing job demands and job resources to be more effective than physician-directed interventions (West et al., 2016). However, their combination has not been studied and there is an overall lack of individualized approaches (West et al., 2016; Panagioti et al., 2017; Bakker and de Vries, 2021). With the larger effect size in reduction of burnout with organization interventions, these results support the notion burnout is rooted in organizational job demands and job resources (Panagioti et a., 2017).

A recent systematic review published in *JAMA* by Rotenstein and colleagues (2018) analyzed the existing literature to characterize the prevalence of burnout in physicians, assessment methods used, study type, and quality of study. This systematic review examined 182 studies, and of those there were 142 unique definitions for physicians meeting overall criteria for burnout or burnout criteria within a subscale (Rotenstein et al. 2018). This clearly demonstrates a lack of consensus on how burnout is measured and what constitutes burnout. Not surprisingly this systematic review found a wide range of prevalence of burnout from zero to 85% (Rotenstein et al., 2018). With so much "heterogeneity between the assessed studies calls into question whether any prevalence estimate cited for burnout can be meaningfully interpreted" (Rotenstein et al., 2018, pg. 1144). The use of arbitrary, varying, and dichotomous definitions of burnout may be the underlying reason for such heterogeneity of results, suggesting burnout may be better explored from a continuous viewpoint (Rotenstein et al. 2018). Similarly, Eckleberry-Hunt and colleagues (2018) argue using the inventories may overestimate the rate of burnout, either by not using appropriate cutoffs or by asking only a single question on a self-reported survey. Further, as discussed with the MBI scoring, Eckelberry-Hunt and colleagues (2018) argue scoring of the MBI as a continuum from low too high for

each domain would better capture the full range of the phenomenon. They also emphasize that future research needs to be careful in stating causation of burnout, and instead focus on "positive psychology that focuses on strength, resilience, growth and happiness…", and further states, "we wholeheartedly believe that physician and physician trainee burnout is a critical issue and one worth intensive study" (Eckleberry-Hunt et al. 2018, pp 369).

Another recent systematic review conducted by Williams and colleagues (2019) looked at the current literature through a conservation of resources (COR) theory lens. This viewpoint has rarely been applied to physician burnout research but is recognized by Maslach and Leiter (2016) as a conceptual model when exploring the development of burnout. The key difference looking at burnout from this viewpoint is that it allows one to conceptualize burnout as a process, not a static-state as it appears with cross-sectional research design (Williams et al., 2019). This specific systematic review examined 43 studies which met their inclusion criteria, and all but two were cross-sectional. Most of the studies used the MBI (n=38) and one of each used either the Copenhagen Burnout Inventory, a single question, the Burnout Syndrome Inventory, the Burnout Measure, or Tedium and Burnout Measure. The cutoff value and the dimensions of burnout examined varied among studies. Additionally, some studies stated an overall burnout score while others did not. Again, this highlights the heterogeneity of assessment instruments and how the same instrument may be used in different studies. The main take away from this review is the paucity of longitudinal studies, only two, and all exploring burnout from a static-state. As Williams and colleagues state "if we are to understand the multiple and

interacting components of burnout as well as other key outcomes, we will need to use longitudinal methods, especially field studies" (2019 pg. 19).

Burnout may have individual effects on physicians, but it may also affect the individuals who utilize the health-care system, making virtually all of society affected at some level. It has been demonstrated that physician burnout leads to poor patient care, lower patient satisfaction, and more medical errors (Williams et al., 2019; Shanafelt et al., 2017; Sibeoni et al., 2019; Gill et al., 1998). Society has expectations of physicians: wanting quality care, to be seen in a timely fashion, and have a good relationship with a high-quality provider (Bodenheimer and Sinsky, 2014). To meet these societal expectations, a set of goals for health-care systems, the Triple Aim, was proposed to: 1) achieve improved health care outcomes, 2) lower the cost of care, and 3) provide a better patient experience (Berwick et al., 2008). However, the increased societal expectations combined with the stressful work-life of clinicians and staff has led to burnout and the achievement of the Triple Aim seemingly unattainable. Furthermore, Jager and colleagues (2017) demonstrated burnout being associated with viewing the practicing medicine as less of a calling, which the authors conclude as a further barrier to achieving the Triple Aim. Thus, Bodenheimer and Sinsky (2014) proposed a Quadruple Aim with a fourth goal of improving the work-life of clinicians and healthcare staff as a necessary component in order for the aforementioned Triple Aim to succeed. For health-care delivery to meet societal expectations, an exploration of well-being through burnout and engagement of the health care team is warranted to enable future studies to incorporate their findings to develop strategies to build engaging work environments and by extension mitigate burnout at the individual, organizational and societal levels.

### *Engagement in Healthcare*

With the paradigm shift in psychology to a positive framework, studies exploring physician engagement have started to appear in the literature, albeit most have been in European countries. One such study by Mache and colleagues (2013) used the UWES to assess work engagement in surgeons, and demonstrated the higher the physician scored on engagement, the higher degree of work ability (i.e. they were more able to manage their working demands). A study looking at engagement in teaching faculty (80% of respondents combined teaching with patient care and/or research, with no designation of MD, or PhD rank) at a European university medical center found those with only teaching responsibilities to be most engaged, while adding on research and patient care responsibilities diminished overall engagement scores, and specifically in domains of teaching (van den Berg et al., 2013). As the authors highlight, this finding calls into question the structure of academic medicine for clinicians, based on the three pillars of research, education, and patient care (van den Berg et al., 2013). In the context of PDs and APDs, the results of this proposed study may be particularly salient as they are by the very nature of their position assuming multiple roles and responsibilities. In as much, there are no studies exploring engagement in PDs and APDs, thus providing an opportunity to better understand how various roles affect their work engagement and the overall influence of engagement on career well-being in the context of an AMC.

The relationship between burnout and engagement has been explored in other occupations and professions, but rarely have they simultaneously been investigated in physicians. Often when exploring a positive outcome (in combination with burnout), a measure such as job-satisfaction is explored as a proxy for engagement, rather than

UWES or through qualitative approaches (De Oliveira et al., 2011). Rao and colleagues (2020) are one of the first to explore engagement and burnout in United States physicians, specifically using the validated instruments MBI and UWES for data collection. Consistent with other studies, early career physicians were more likely to report higher levels of burnout, with career tenure having no association with engagement (Rao et al., 2020). By exploring engagement and burnout simultaneously, the authors were able to demonstrate the mitigating association of engagement on burnout. In other words, regardless of level of burnout (authors stratified burnout into four levels 3=high in all three subscales, 2=high in two subscales, 1=high in one subscale, 0=not high in any subscale) the outcome of career satisfaction and the likelihood of staying in the role increased as engagement increased (Rao et al., 2020). As such, this demonstrates mitigation or prevention of burnout as not the only strategy to enhance physician well-being, but the promotion and facilitation of engagement may have a mitigating impact on burnout.

A scoping review by Perreira and colleagues (2018) explored engagement in hospital physicians. The 15 articles that met their search criteria were predominantly cross-sectional, and thus the authors called for more randomized control trials, in addition to qualitative and mixed methods studies to provide "deeper insight" into physician engagement. Perreira and colleagues (2018), used the narrowed definition of engagement as proposed by Schaufeli, Salanova, and colleagues (2002), thus removing much of the ambiguity with studies stating physician engagement as attitudes, behaviors, implementation of best practices, accountability, performance measurement, and involvement in strategy. The authors found, and consistent with van den Berg and

colleagues (2013), task combination (i.e. combination of teaching, research, and patient care) to be negatively associated with engagement as were job demands, including quantity of work, emotional demands, and overtime (Perreira et al. 2018). Lastly, Perreira and colleagues (2018) concluded job resources (e.g. physical, psychological, social, and institutional aspects of the job, either mitigate the effects of job demands or stimulate personal growth) were demonstrated to have a positive association with engagement.

**Burnout and Engagement in Academic Medicine**

Academic medical centers (AMC) "have a tripartite mission" of training and educating physicians, all the while advancing research and providing health care to the surrounding community (Pololi et al., 2009). For AMCs to achieve this mission, Pololi and colleagues argue faculty need to be energized, engaged, creative and compassionate (2009). However, this is often not so; studies have demonstrated high levels of faculty dissatisfaction, attrition, and burnout at AMCs with burnout being a significant predictor of leaving academic medicine (Pololi et al., 2009; Shanafelt et al., 2011). Often AMCs may feel insulated and not deem it necessary to address the high attrition rate. In addition, AMCs may see the ready pool of residents-in-training as potential replacements, with a lower salary, thus cost-saving (Shanafelt et al., 2017).

Burnout has been demonstrated as a factor leading to high attrition rates in academic medicine faculty. A recent study at Stanford University found the actual 2-year rate of turnover among physician faculty who were burned out was double that of non-burned out faculty (Shanafelt et al., 2017). Some studies have attributed burnout at AMCs to lack of alignment of personal values and institutional values, and the misalignment of faculty ideas of meaningful work compared to their institutional expectations and actual

work (i.e., career fit) (Shanafelt et al., 2009; Lieff, 2009; Pololi et al., 2012; Pololi et al., 2009). A study performed by Shanafelt and colleagues (2009) found that among physicians who align education as the most personally meaningful activity, only 40% of those individuals spent more than 20% of their time performing education activities. Thus, in an AMC, tasked with educating the future physicians, those who find meaning in education are often tasked with performing clinical (i.e., patient contact hours for revenue) or research tasks they do not find as meaningful. This is thought to lead to dissatisfaction and then possibly burnout. In addition, as previously described, task combination has been found to be negatively associated with engagement (van den Berg et al., 2013; Perreira et al., 2018)

Clinician-educators are a specific subset of individuals within an AMC who fill the roles and identities of a clinician as well as an educator. Clinician-educators spend most of their professional effort either in direct patient care or in education (Jibson et al., 2010). Having dual identities and responsibilities lends this group to a unique set of circumstances in terms of burnout and engagement. The factors that lead to physician burnout may be at play as well as career fit in an AMC (i.e., an educator). A specific function a clinician-educator may hold is that of a residency program director (PD) or assistant program director (APD). These individuals are charged with running the programs tasked to train residents, all the while practicing as a clinician themselves, thus placing them at the center of graduate medical education.

**Resident Program Directors and Burnout**

Residency PDs have multiple roles and responsibilities that may contribute to their personal well-being, as both a physician and an educator. To date, there have been

ten studies addressing burnout, stress, resiliency, and turnover status in various combinations in residency PDs. Categorizing by type of medical subspecialty, internal medicine (IM) is the most represented with three studies, two studies for pediatrics and family medicine, and one study for each general surgery, radiation oncology, and anesthesiology (West et al., 2013; O'Connor et al., 2018; Beasley et al., 2001; Porter et al., 2018; Anderson et al., 2000; Aggarwal et al., 2015; Barton and Friedman, 1994; Weiss et al., 1991; Psenka et al., 2020). All ten studies utilized a survey or questionnaire as the data collection method, via cross-sectional quantitative methodology with participants recruited from all US based residency programs. No study explored residency program directors within the same institutional context nor did any explore engagement.

The first two studies exploring stresses and "problems" with residency program directors are those published investigating pediatric resident program directors (Weiss et al., 1991; Barton and Friedman, 1994). Both explored what the authors termed "stress" with neither using a validated instrument in measuring burnout as is currently conceptualized (Weiss et al., 1991; Barton and Friedman, 1994). Even without using validated instruments, 30 years ago the two studies demonstrated a need for understanding the complexity and skill set necessary to direct a residency program, and the stresses involved. Specifically, Weiss and colleagues (1991) found PDs perceived lack of time, burden of other practice and academic responsibilities, and fear of not filling in the match all of the residency match spots as the top three areas causing them personal "aggravation" and "stress."

The study of IM residency program directors examined the turnover rate as well as which potential job characteristics contributed to turnover (Beasley et al., 2001). A single question inquired about burnout, and reported as "none, maybe a little, yes, some/moderate/lot" was found not to be significantly associated with the intent to leave. An interesting finding, although not statistically significant, was demonstrated that if the program director received formal training in dealing with problem residents, it was protective against intention to leave (Beasley et al., 2001). By not using a validated burnout instrument (i.e., MBI) and limiting the number of characteristics and categorizing options, it may be forcing the participant to make a choice, as well as missing other potential causes for an intent to leave.

West and colleagues (2013) explored burnout in IM residency program directors, using only two MBI items, one for each emotional exhaustion and depersonalization, along with other survey items concerning depression and quality of life. Notable findings were that women had higher rates of burnout that men in the study, as well as those who were more junior program directors (West et al., 2013). The authors note that women reported more work-home conflicts compared to men. This raises a few questions, such as: how does work-home conflict influence these challenges? Does this assume traditional assumed gender roles? Do faculty receive support for childcare or other home conflicts? Stating the more junior PDs demonstrate a higher burnout prevalence may be demonstrating a survivor bias, where the longer-term more senior program directors did not experience burnout and thus still don't, and/or those who have experienced burnout have already left the position of program director, as well as those who may have once experienced burnout but no longer. This survivor bias was recognized early by Maslach

and Jackson (1981 pg. 111) who claim: “if people have difficulty in coping effectively with burnout… they may leave their profession entirely” and thus the late-career faculty may be those who have survived the stresses of their career. Lastly, West and colleagues (2013) defined high emotional exhaustion and high depersonalization as those participants that responded at least weekly on the single item for emotional exhaustion or depersonalization, respectively. By not concurrently exploring engagement this brings into question what the participant is experiencing the remainder of the days of the week. Schaufeli and Bakker state “feeling emotionally drained from one’s work ‘once a week’ does by no means exclude that in the same week one might feel bursting with energy” (2004 pg. 294).

O’Connor and colleagues (2018) used a yearly national survey collected from 2012-2016 to assess the change in IM program directors and the correlations with burnout. This study stated that burnout was stable over this time period, as well as an association with burnout and the consideration of resigning and with turnover (O’Connor et al., 2018). However, if those that are experiencing burnout resign, and the burnout prevalence remains the same, it does not account for those that are burned out who left their position, as they are not in the study population, again suggesting a survivor bias. In addition, at each successive year the category of “unknown” (i.e., no survey response data) increased, further highlighting the likely presence of response bias.

The remaining four studies exploring burnout in resident program directors all used the MBI, either Human Services Survey or one not specifically stated. Anderson and colleagues (2000) found in general surgery program directors being of younger age, and fewer years of tenure as program director to be associated with higher scores on the

burnout scales, contrasting the studies in radiation oncology, anesthesiology, and family medicine showing no association of age or length of tenure with burnout (Aggarwal et al., 2015; Porter et al., 2018; De Oliveira et al., 2011). Comparing across all four studies there is a lack of consistency in how the MBI was scored, in addition to how many items were answered on the burnout survey. For example, De Oliveira and colleagues (2011) state cutoff points for each subscale with burnout defined as those who score high for emotional exhaustion and depersonalization, and low personal accomplishment and further stratified into a five-category burnout index (low, low-moderate, moderate, moderate-high, and high) using proportional scoring. Anderson and colleagues (2000), and Aggarwal and colleagues (2018) classified respondents into low, moderate and high for each of the three burnout domains, "based on MBI scoring procedure." Lastly, Porter and colleagues (2018) used one MBI item each for emotional exhaustion and depersonalization, and if the respondent reported experiencing one at least weekly, this was classified as high emotional exhaustion or depersonalization. Needless to say, this provides a range of results. Two studies report percentages of high emotional exhaustion, 27.3% (Porter et al., 2018) and 25% (Anderson et al., 2000) with neither reporting the prevalence of "burnout" in the respective populations. The remaining two state participants meeting their classification of moderate to high burnout ranged from 52% with anesthesiology program directors (De Oliveira et al., 2011) to 89% of radiation oncology program directors (Aggarwal et al., 2015).

The most recent study exploring burnout in family medicine PDs, utilized a cross-sectional study design to assess burnout via two questions from the MBI, a Loneliness scale for depression, and three items assessing the Workload, Values, and Control from

areas of work-life (Psenka et al., 2020). The study found that once a week 25% of PDs reported being "burned out", and 10% claimed to "become more callous towards people" (Psenka et al., 2020). This does not place into context when the PD stated they were burnout at least once a week, or in what role they were more calloused towards people. In addition, it's unclear what they were experiencing the other moments of the week not captured. This study performed univariate and multivariate analysis and found associations of emotional exhaustion with Workload, Values, Community, and Control. The authors concluded having a lack of time and resources to meet job demands was a "common stressor" (Psenka et al., 2020). However, they did not frame their findings into a theory such as JD-R or the mediation model of burnout in order to further conceptualize their findings.

Overall, there is a lack of consistency in the instrument employed to investigate burnout, either the validated MBI or other, and specifically, with how the instrument is interpreted. MBI studies used a range from two to 22 items along with various cutoffs and criteria for describing those who are burned out or not. First, this makes it challenging to compare studies, as previously discussed in limitations of the MBI. Second, in an attempt to apply these findings for interventions strategies to benefit PDs, how does one begin to understand complex phenomenon of burnout and engagement? Most importantly, the use of instruments "overpower[s] the voices of the target group" and does not afford an understanding of how program directors perceive burnout and engagement (Lindgren et al., 2013, pg. 139). No studies of PDs have explored the engagement, with only one investigating satisfaction of current role which is a narrower outcome construct (Aggarwal et al., 2015). Aggarwal and colleagues (2015) report that

78% of respondents are satisfied or highly satisfied, and at the same time 89% meet the authors definition of moderate to high burnout, highlighting the complexity, day-to-day and week-to-week fluctuations of individual well-being. Using cross-sectional survey data has rendered the general studies regarding burnout in physicians and in program directors specifically, to be more descriptive than explanatory. As O'Connor and colleagues state a "better understanding of what contributes most to individual physicians transitioning into and out of burned-out states deserves further investigation" (2018 pg. 260).

**Summary**

By appreciating the complex relationship between burnout and engagement and the perception of their work life, one can demonstrate the need for participants to share their narratives through their own words and actions. Keeping with the conceptualization Kahn (1990 pg. 694) proposed for engagement as "the harnessing of organizational members selves to their work roles," it begs the question how best to explore and understand the continuum and the momentary fluctuations between engagement and burnout. Although this study did not use a single theory or model to guide the questions and observations, an understanding of the competing conceptualizations of burnout and engagement is crucial to understanding the participants' perceptions. As such, the dialectical approach, mediation model of burnout, JD-R theory, along with COR theory and SDT were all working, living theories in the researchers mind as they observed, interviewed, and created dialogue with the participants (Leon et al., 2015; Demerouti et al., 2001; Hobfoll, 1989; Maslach et al., 2001). Specifically, it was considered how PDs and APDs experience their work life through their own narrative as they navigated

moments of emotional exhaustion, dedication, fulfillment, and congruence or incongruence of personal and organizational values. Leiter and Maslach state, "further progress in this arena [burnout and engagement research] may not come from assessing the presence or absence of a specific state, but from considering a range of possible psychological connections with work that encompass all of the core dimensions of vigor, exhaustion, dedication, cynicism, efficacy, and absorption" (2017 pg. 56). In so doing, this nuanced understanding may allow institutions, healthcare clinics, and resident training PDs and APDs to develop engaging, fulfilling, and meaningful careers.

Most burnout studies use the MBI, engagement uses the UWES, and most research on PDs uses the MBI with a heterogeneous conceptualization of burnout without exploring engagement. This study explored the participants experiences of exhaustion, dedication, congruence or incongruence of role, efficacy, cynicism, and vigor without categorizing the participants as burned out or engaged, but by placing the whole person in the context of their work-life. Taking in total, using a more encompassing definition of engagement proposed by Kahn (1990), the call for further refinement and theory conceptualization by Cole and colleagues (2012), and a dialectical framework proposed by Leon and colleagues (2015), informed the approach to this study. As such, this study utilized interviews, along with observations to simultaneously explore the perception of engagement and burnout over a longitudinal study to better appreciate the whole person and their complexity at work (Kahn, 1992). The methods section discusses in detail study participants, data collection, data analysis, and the measures to ensure trustworthiness.

# CHAPTER 3: METHODOLOGY

Exhaustion, cynicism, and reduced professional efficacy are the three main components of burnout as proposed by Maslach and Leiter (2016). They also state in recent theorizing of burnout that both personal and job characteristics need to be considered jointly within the context of the institution and/or organization. In addition, it has been demonstrated that personal characteristics (i.e., demographics) are less of a factor than work environment in the development of burnout. To appreciate the complexity of a person's work life engagement, as proposed by Kahn (1990; 1992), Maslach and Leiter (2016) conceptualized the "whole person" within the context of both individual and organizational factors as they shape their perceived experience. Further, Leiter and Maslach (2017) propose in order to advance burnout and engagement research, it may not be necessary to state the presence or absence of any particular state (i.e., burnout or engagement) but rather how a person experiences the full range of psychological connections to work. Thus, it is important to appreciate the "whole person" situated in the context of institution and organization to explore how the individual experiences exhaustion, cynicism, efficacy, psychological presence, and fulfillment, while also considering institutional and organizational job demands and resources. As such, with no study exploring engagement in PDs and APDs or in combination with burnout, this study aimed to explore their various roles and experiences, and how they affected their career well-being, fulfillment, and dedication.

Burnout and engagement are complex phenomena that must be considered within an organizational context. As such, this qualitative study investigated how residency PDs experienced their roles as directors through being engaged, exhausted, fulfilled, and

supported within the context of their work and social milieu. The goal was not to determine if the participants were burned out or not, engaged or not, but to understand how they experienced their full range of psychological presence in their roles. This longitudinal study was conducted over a one-year period as other studies have demonstrated daily, weekly, and momentary fluctuations within an individual in both burnout and engagement and thus, cross-sectional studies were unlikely to capture the full complexity of the phenomenon (Sonnentag, 2003; Bakker and Xanthopoulou, 2009; Simbula; 2010, Ohly et al., 2010).

As such, this study sought to answer the following research questions:

1. How do PDs experience their residency program administrative tasks (i.e. faculty recruitment, required accreditation documentation, recruitment and selection of residents, evaluation and promotion of residents, etc.) in relation to their career well-being, fulfillment, and dedication?
2. How do PDs experience their clinical tasks, both in the role of providing patient care as an autonomous physician and training residents during patient encounters, in relation to their career well-being, fulfillment, and dedication?
3. How do PDs experience their role(s) in an educator/scholarly activity (i.e. development and delivery of didactic sessions, one-on-one resident training in a clinical context, simulations, etc.) in relation to their well-being, fulfillment, and dedication?
4. How do PDs experience momentary emotional exhaustion, cynicism, professional efficacy, dedication, vigor, psychological affect their well-being, fulfillment, and dedication?

## Overview of the Research Design

Prior research exploring the phenomenon of burnout was often situated in a quantitative research paradigm and informed by a positivist lens centering analysis around correlation, cause and effect, or prevalence within a population (e.g., medical students, residents, program directors or practicing physicians) (Merriam and Tisdell, 2016; Rotenstein et al., 2018; Williams et al., 2019; Shanafelt, 2019). This was often in alignment with how most individuals disseminate and interpret research within the medical science community, as most research was conducted through a positivistic philosophy centered on the etic (i.e., the external social scientific perspective of reality; e.g., what is the best treatment option utilizing certain measurable parameters, random control trials?) (Fetterman, 2010). However, there was an increasing desire by health professions education researchers for a more rich, nuanced and deeper understanding of how people interpret and attribute meaning to their experiences as well as how they construct their world (Merriam and Tisdell, 2016; Rashid et al., 2019; Reeves et al., 2013; Ramani and Mann, 2015). In order achieve that aim, a basic qualitative research design was utilized to explore the lived experience of residency program directors within a specific cultural, institutional, and societal context.

Even as more qualitative methodologies were gaining popularity in health professions education, these studies often utilized interviews, either individual or as a focus group, which has largely built a perceptional depiction rather than what actually happens in the various domains (Reeves at al., 2013). To gain an emic perspective (i.e., an insiders perspective of reality; instrumental to understanding and accurately describing situations and behaviors) of what the participants do (i.e., not only what they say they

do), participant observation and document analysis enabled the potential to yield a detailed, thick, rich and comprehensive account of a social phenomenon (Merriam and Tisdell, 2016; Creswell, 2013; Reeves at al., 2013; Rashid et al., 2019; Goodson and Vassar, 2011; Atkinson and Pugsley, 2005; Fetterman, 2010). Constructing a comprehensive account is built upon the work for Gilbert Ryle in his essay *Thinking and Reflecting* (Ryle, 2009) written from lectures he presented in the 1960s, thus first using the philosophical term "thick" description enabling the interpretation of the behavior in context, and prescribing intentionality. This was further expanded upon by Clifford Geertz (1973), using the term "thick description", in describing ethnographic description as "really our own constructions of other people's constructions" thus the context must be richly and thickly described for credibility (Ponterotto, 2006). This allowed for the appreciation of different perspectives via different types of data and the methods utilized to gather said data (Reeves et al., 2008; Rashid et al., 2019; Fetterman, 2010; Hammersley and Atkinson, 2007). Specifically, this study explored the lived experience of residency PDs and APDs at an academic medical center. As such, a basic qualitative approach was used to explore the social interaction and systems, shared practices and beliefs, and how the institutional context shaped and was shaped by the individual (Rashid et al., 2019; Fetterman, 2010; Hammersley and Atkinson, 2007).

**Emic and Etic Perspective**

The insider's perspective of reality, or emic perspective is the cornerstone of most observational studies (Fetterman, 2010; Headland et al., 1990; Harris, 1976). The researcher must have an appreciation that the insider's perception may not conform to what others see as the "objective" truth and accept multiple realities exist from a member

perspective and use participant observation to better understand and explore how members do what they do (Fetterman, 2010). At the other end of the spectrum, is the external perspective of reality or the etic perspective (Fetterman, 2010). The etic perspective often utilizes a positivist lens while attributing social action as a result of environmental stimuli, where an emic perspective often attributes human action motivated by ideas. At one point in time, there was debate as to where observational research should land on the emic or etic continuum. This debate mainly occurred within anthropology, with Kenneth Pike and Marvin Harris taking opposing viewpoints, with the former placing the etic viewpoint from outside of a system, and emic from inside said system, based on linguistics (Headland et al., 1990; Harris, 1976). Harris, being a cultural anthropologist, defined emic as being focused on one "culture" whereas etic was concerned with identifying "cross-cultural" characteristics (Olive, 2014). However, today it is thought that a combination of the two best serves a researcher utilizing observational approaches (Fetterman, 2010). For this particular study, data was collected through an emic perspective, with the subsequent analysis situated in both the emic and etic perspective of the researcher via the literature of burnout and engagement.

**Study Setting**

The study's participants, residency program directors (PD) and associate residency program directors (APD), were faculty at Indiana University School of Medicine (IUSM). However, the specific locations unto where the observations occur were multiple and diverse in regards to patient demographic, medical specialty, and interaction of participants. Thus, each of the specific "settings" for this particular study constituted its own unique context. In addition to being a traditional large AMC situated

on a large campus of research facilities and associated hospitals, this particular AMC was comprised of a central large campus with many regional campuses dispersed throughout the state. As such, the AMC had working relationships with the county owned and operated healthcare system, providing a unique and varied environment for clinical practice, teaching and research.

**Methods**

This section presents a description of the participants, participant selection, data collection methods, and data analysis. Data collection for this study commenced at the beginning of August 2020 and continued through September of 2021. Phase 1 of the study entailed the recruitment and participation of a time-series cohort (i.e., same cohort of participants which data was collected at multiple times, locations, and via multiple methods) of which they partook in three interviews over a one-year time frame, recurring participant observation, as well as pertinent document analysis. Phase 2 commenced after 8 months of data collection, and was informed by preliminary analyses of Phase 1 data, which resulted in additional five participants recruited for a single cross-sectional interview. Further description of Phase 1 and 2 are below. The study utilized a basic qualitative approach with the data collection methods of observation, semi-structured interviews, and document analysis to explore the experiences of residency program directors and associate program directors. This study situated their experiences in an institutional and US healthcare delivery system context thus investigated how their various roles (i.e., lived experience) related to their well-being, fulfillment, and dedication.

### *Participants/Study population*

**Phase 1.** Prior to recruiting participants, the study was submitted for Institutional Review Board (IRB) approval and expedited status was granted in July 2020 (#2006206077). The initial participants recruited for this study were residency program directors and associate program directors at IUSM which contains 45 residency programs. Participants were recruited via email, which contained an outline of study details, a data collection timeline, as well as a consent form which was signed and returned to the researcher (refer to Appendix A for recruitment materials). The initial email was sent to eight program directors, with the aim of recruiting four participants. If no reply was received a subsequent weekly recruitment email was sent, for a total of three attempts. The initial group of program directors were recruited via purposeful sampling using the criteria of specialty, location (academic center versus community), length of time in program director position, and self-reported gender. The rationale for this purposeful sampling was prior cross-sectional research demonstrated associations with the aforementioned characteristics to influence prevalence of burnout and resilience (Anderson, Mavis and Dean, 2000; West et al., 2013). To achieve maximum variation in sampling, program directors in primary care and procedural-based specialties were recruited along an equal gender representation in order to achieve individual and site observation variety (Creswell, 2013).

The initial recruitment period, with ten initial PDs recruited, generated two participants and with the assistance of a clinician-educator who personally contacted PDs and APDs on the researcher's behalf, an additional participant was recruited, resulting in a total of three participants for Phase 1. Thus, two of the participants are PDs and one an

APD, all were female and were located at the main AMC. As the study evolved, a fourth participant was not able to be recruited. Below are descriptions of the participants to provide more context as to who they were as individuals and complexity of their lives in and outside of academic medicine. Most, if not all of the information provided, was publicly accessible.

Participant A is a female in her mid-forties who completed her medical degree, residency, and fellowship at the same institution that she is now faculty and residency program director. She is the program director of a procedural based specialty for six years, and during the first interview stated being "committed to 10 years [as program director]." She is married to a physician and has two children.

Participant B is female, mid- to upper-thirties, who completed a medical degree in a neighboring state school, but completed residency at the institution where she is currently the residency program director. She is married to a non-healthcare worker and has two children.

Participant C is a female approximately fifty years of age who completed medical training and residency training at a southern school where she remained on as faculty and associate program director prior to coming to the current institution. At the current institution, she had been an associate program director for "8 or 9 years" and is involved with curriculum implementation and design as well as coaching and precepting at a continuity primary care clinic. She is married and her spouse was a "stay at home parent," with two teenage children.

**Phase 2.** Prior to recruiting participants for Phase 2 of the study, an amendment was submitted to Institutional Review Board (IRB) and approved in March 2021

(#2006206077). Since a fourth participant was not able to be recruited, it was decided to build an interview protocol and recruit program directors for a single cross-sectional interview to gain perspectives from a more diverse representation of program directors. An additional five program directors were recruited to include: four male and one female, from a mix of primary care, procedural, and inpatient specialties. In addition, two of the additional participants were located at two different regional campuses, which were located in geographically separate (i.e., different towns and cities) from the centrally-located AMC. Thus, additional recruitment allowed for the exploration of male program directors as well as programs outside of the main campus.

However, underrepresented in medicine (URiM) faculty were not represented as participants for this study. It needs to be acknowledged URiMs' experiences at academic institutions are unique when compared to the majority (i.e., white) faculty member. As Jeffe and colleagues (2019) demonstrated, URiM faculty have a higher attrition and lower promotion rates as compared to their white colleagues. Page and colleagues (2011) state the number of "African Americans and Latinos" comprise 28% of the U.S. population, but only 7.2% of all medical faculty." With this underrepresentation comes isolation as well as disproportionate demands which may not translate into promotion, such as serving on committees, mentoring URiM medical students, and community engagement, which has been described as a "Black tax" (Page et al., 2011; Cohen, 1998, Gnanadass et al., 2022). During recruitment for this study URiM faculty members were actively recruited but none selected to participate. Thus, by having only the majority represented (i.e., white), experiences of URiM faculty are not present, and represent a limitation to the richness and diversity of the collected data.

## Data Collection

### *Accessing the Community and Participants*

A hallmark and defining attribute of fieldwork is the engagement in the society, or immersion in the lived experience with direct observation of behavioral actions (Reeves et al., 2013; Fetterman, 2010; Merriam and Tisdell, 2016; Creswell, 2013). To achieve this, fieldwork was conducted over long time periods with the participants in their natural setting either continuously or non-continuously, which is often setting dependent (Fetterman, 2010). This allows for a naturalistic approach while seeing the participant respond to real-world incentives and constraints in place of the artificial response often observed in a laboratory or experimental condition (Fetterman, 2010). Entering the community or cultural group is one of the initial challenges and limitations for undertaking observational research, thus, having an informant or entry point is often the best and easiest access point into the group (Fetterman, 2010). A key entry point for the researcher was a member of the clinician-educator community at the AMC in the study. Though herself not a program director, she worked directly with many program directors and facilitated introductions into the program director community, supplying potential participants (as previously mentioned regarding participant recruitment).

### *Observation*

Observation is a part of everyday life. Not only visual, but taste, smell, sound, and touch are combined to allow for the processing and interpretation of our surrounding world (Foster, 2011). Observation in research, however, is organized, recorded, and interpreted beyond what the everyday individual processes as an observation. As such,

observation in research is planned and systematic, versus the often spontaneous and haphazard observations of everyday life (Foster, 2011).

One aspect of field work observation is *immersion* which "combines participation in lives of the people under study with maintenance of a professional distance allow[ing] adequate observation and recording of data" (Fetterman, 2010, p. 37). This immersion was traditionally conducted over 6 months to a year (possibly more) and becomes more refined as the researcher appreciates the complexity of the community (Fetterman, 2010). Emerson, Fretz and Shaw (2011) describe immersion as how "the field researcher sees from the inside how people lead their lives, how they carry out their daily rounds of activities, what they find meaningful, and how they do so" (pg. 3). In other words, it permits the researcher to directly experience the routines, everyday occurrences, struggles, stresses, and interactions while appreciating the fluidity of their lived experience via an interactive process (Emerson et al., 2011). Broadly, applying basic qualitative methodology and, specifically, participant observation informed the researcher to the complex relationships, challenges, interactions, values, feedback, resources and demands that inform how someone experienced burnout, engagement, and/or demonstrates resilience.

For this study the researcher was immersed within the program director community from August 2020 to July 2021, conducting a total of 35 observations. The observations included: surgical skills lab (both human donors and pig), resident didactic sessions (in-person and virtual), continuity primary care clinic, simulations, resident program meetings, resident interview welcome session, resident research presentation day, and new resident orientation. See table 3.1 for more explanation of observation sites.

These locations were selected to allow for observations to occur in the various roles a PD may assume, for example: clinical responsibilities, resident education, administrative functions, recruitment, and selection of future residents. Due to the COVID-19 pandemic, there was limited availability for direct observation in clinical settings. However, at the continuity clinic the researcher was able to observe one participant interacting with residents as preceptor, in addition to direct observation with patients in a clinical setting. Observational research is oft described as a continuum as it relates the co-creation or interactive nature of the qualitative paradigm (Privitera and Ahlgrim-Delzell, 2019). On one end of the continuum was the researcher as a complete observer, an unobtrusive if not at times covert observer of participants in a given setting. The other extreme is the researcher as complete participant, often embedded and a full participant in the daily activities of the social community. Situated between the extremes are "observer as participant" and "participant as observer." As an observer as participant, the researcher is primarily an observer with minimal interaction. As such, the participants know they are being observed, but the researcher remains neutral. As a participant as observer, the researcher engages, creates dialogue, and may even at times participate in the activity or event.

The researcher in this study was not a physician, as such, complete participation in the decision-making process of a physician, an appreciation for the immensity of decision making, and formulating a diagnosis with subsequent treatment were beyond the scope or legality of the researcher to participate. However, the researcher was trained in both clinical and anatomic pathology, as well as extensive training in the anatomical sciences, providing a working knowledge of the medical setting. In addition, the

researcher, who self-identifies as a white male, needs to be acknowledged as a position of privilege, and being allowed to move in spaces where Black, Indigenous, and persons of color (BIPOC) may not have the same privilege. As a self-identified male, interactions with the female participants may represent gender inequalities, however in all situations the researcher was the more junior in age, and not a medical doctor. In this study, the position of the researcher as complete observer or participant as observer was situation

**Table 3.1.**

Title. Description of observation sites.

| Observation Location | Description |
|---|---|
| Surgical Skills Lab | Residents are provided the opportunity to practice surgical skills with director supervision of clinical faculty to include the PD. Opportunity to observe participants interacting and educating residents. |
| Resident didactic sessions | Observe PDs and APDs delivering formal didactic content to residents, through both in-person and virtual platforms. |
| Continuity primary care clinic | Residents follow a patient panel longitudinally, (continuity of care) with direct supervision by faculty. Allowed for observation of participants in education of residents as well as a participant engaging in direct patient care. |
| Simulations | Residents engage in simulated patient encounters in a controlled environment (i.e., engaging in emergency procedures or non-emergent patient encounters). Observation on participants interaction with residents in a simulated and controlled environment. |
| Residency program meetings | Attendees include, faculty, staff, PDs, APDs, and residents to discuss results of resident survey results, program changes, resident concerns, interview procedures for applying residents, etc. |
| Resident interview session | Observed the PD (participants) engage with potential residents, introduce their programs, and observe interaction of participants with faculty and staff. |
| Research presentation | Residents present research which they collaborated with faculty and participants in order to complete. Observe participants in a mentoring role. |
| New resident orientation | Incoming class of residents' orientation as they commence their resident training. Observe participants educating, |

| | |
|---|---|
| | interacting, and administering the residents and the program at large. |

specific. Observations conducted at the continuity clinic or surgical skills lab often permitted the researcher to converse about differential diagnoses, rationale for lab testing, examine microscopic slide preparation, or discuss anatomy during surgical operations, thus situating the researcher as a participant as observer but at times a complete observer as occurred during formal didactic sessions. During a given observation, the researcher cannot observe "everything" or attempt to determine the "Truth" but "reveal the multiple truths in others' lives," thus develop certain perspectives by engaging in certain aspects and not others, thereby selection of what is observed was inevitable and necessary (Emerson et al., 2011).

By the very nature of interacting with participants in a given setting the researcher needed to be aware of their impact on the actions and statements (Emerson et al., 2011; Hammersley and Atkinson, 2007). This influence of the researcher on the setting as well as what occurs during formal and informal interviews is termed reactivity or reactive effects (Emerson et al., 2011; Hammersley and Atkinson, 2007). In other words, the researcher must interpret the accounts within a setting contextualized by the surroundings, all the while being cognizant of how the presence of the researcher shaped the collected data (Hammersley and Atkinson, 2007). This even extends to conversations and dialogue either arising from solicited or unsolicited statements, as informal questioning was inherent in participant observation. Distinguishing one from the other may have little value as the researcher cannot assume unsolicited statements were not influenced by the researcher (Hammersley and Atkinson, 2007). Emerson and colleagues

(2011) argue that the relationship between the field researcher and participants does not disrupt or alter social interactions but may in fact disclose how people in the setting create social discourse and meaning, in line with a social constructionist perspective. Similarly, Hammersley and Atkinson (2007) state that "pure" data free from bias is not the aim nor does it exist, but instead strive to discover the best interpretation of the data obtained.

The product of observations were descriptive fieldnotes created by the researcher. However, simply "putting into words" the actions and overheard talk as closely as to the observed activities would be assuming that there was one "best" or "correct" means to write fieldnotes (Emerson et al., 2011). In its place, different, varied, and valuable descriptions of similar or even the same setting occurred depending on the perception and interpretation of the researcher (Emerson et al., 2011). In essence, the descriptive fieldnote was an account of select and emphasized features, thus were the products of an active, interpretive and sense making practice that framed what and how fieldnotes were written (Emerson et al., 2011). This process resulted in the inscription of social life and discourse into the written word via a reductive and selective process of the setting.

In writing fieldnotes, the researcher would made "headnotes" of initial impressions, significant events, or even those that were contrary to expectation. As moments presented themselves the researcher would write "jottings" in a notebook, capturing events, reactions, and dialogue for use when sitting down at a later time to compose the full fieldnote (Emerson et al., 2011). The subsequent fieldnotes were written as close to the observation as possible, often the same day, if not attainable within 24 hours of the observation, in order to limit the distortion of memory, thus avoiding

reduction of events into generalities. In “immediately written fieldnotes, distinctive qualities and features are sharply drawn” allowing for vivid memories to be conjured during coding and in subsequent analysis to add texture and variation while avoiding the “flatness” of generality (Emerson et al., 2011). See Table 3.2 for specific setting description and time spent per observation for Phase 1 participants A-C.

**Table 3.2.**

Title. Observation data collection phase 1, sites and duration.

| Participant | Observation Setting (duration in hours) |
|---|---|
| **A** | Program Evaluation Committee (PEC) **(2.5)** |
| | Surgical Skills Lab **(3)** |
| | Resident Interview (**1)** |
| | Orientation **(2)** |
| **B** | Program Evaluation Committee (PEC) **(2.5)** |
| | Surgical Skills Lab **(6)** |
| | Orientation **(8)** |
| | Didactic **(6)** |
| | Simulation **(6)** |
| | Resident Interviews **(1)** |
| **C** | Didactic **(1.5)** |
| | Continuity clinic (clinical) **(8.5)** |
| | Continuity clinic (resident preceptor) **(42)** |
| | Orientation **(1)** |

### *Interviews*

Interviews help to explain and place into the larger context what the observer perceived and experienced during the direct observations with it often being one of the most important data gathering strategies (Fetterman, 2010). This study employed both scheduled, formal, semi-structured interviews and informal interviews during observations with participants. The first interview with participants was conducted within the first month of the study to build rapport as well as to gain an appreciation for details of their specific career path. A second interview occurred at six months, and a final interview at the conclusion of the study. Informal interviews were employed throughout the fieldwork process as these are used to help the researcher discover how participants' thought and how participants' experiences are aligned and different (Fetterman, 2010; Hammersley and Atkinson, 2007; Merriam and Tisdell, 2016).

Interview 1 began with a review of consent, issues of anonymity, and address any questions the participant had. See appendix B for the list of questions and prompts utilized during interview 1. A semi-structured interview was conducted with open-ended questions to allow for the participant to convey their experiences as a program director. Specific questions asked participants to highlight events that were mentally taxing, times of fulfillment and engagement, and to provide a general understanding of their role as they experienced it. The semi-structured protocol, in addition to providing a consistent structure for each interview, permitted the participant to speak freely, but also allowed the researcher to ask appropriate follow-up questions. Each of the initial interviews of the participants A-C were approximately 45 minutes in length, conducted via Zoom (Zoom Video Communications, San Jose, CA, 2012), and utilized Otter audio recording

(Otter.ai, Mountain View, CA, 2016) which allowed for simultaneous verbatim transcription.

Interview 2 occurred approximately 4-6 months into the study. At this time, the program directors were at the end of new resident interview timeframe, prior to submitting desired residents to MATCH, and before knowing who would be in the new class of residents. Interview 2 also used a semi-structured approach. The prompts which comprised the interview protocol were written to gain further insight into events observed during direct observation, aspects of resident interviews, and thus, the prompts were specific to each participant. See Appendix B for the prompts used for interview 2. Interviews were conducted via Zoom (Zoom Video Communications, San Jose, CA, 2012), lasted approximately 45 minutes, and utilized Otter audio recording (Otter.ai, Mountain View, CA, 2016) which allowed for simultaneous verbatim transcription.

Interview 3 was conducted in the summer of 2021, at the conclusion of the study. One of the main objectives of the final interview for the three longitudinal participants was for them to reflect on the challenges and rewarding aspects of their position, as this year was challenging, unique, and unlike any in modern times due to the COVID-19 pandemic. In addition, questions inquired as to how they perceived graduate medical education moving in the future and possible challenges. Lastly, questions asked in the first interview were once again addressed to assess the temporal nature of their responses. The interviews concluded with an open-ended reflection on participating in the study, insights gained, benefits, and any final thoughts with interview length ranging from 45 min to greater than one hour. See Table 3.3 for dates of interviews conducted with Phase 1 participants A-C.

As the study evolved and with insights from the interviews and numerous observations of the three longitudinal participants, it was decided to elicit the participation of additional residency program directors to gain their perspective and experiences as a director, previously described as Phase 2 in participant recruitment. Thus, additional program directors were recruited in May 2021, for a one-time, cross-sectional, semi-structured interview. See Appendix B for the protocol utilized for interviews (titled: "One-time Interview of Program Directors"). Since it was a singular opportunity to converse with Phase 2 participants, the interview protocol was based on

**Table 3.3.**

Tile. Interview data collection times for Phase 1.

| Participant | Interview Date |
|---|---|
| **A** | 8/27/2020 |
| | 2/17/2021 |
| | 9/10/2021 |
| **B** | 8/10/2020 |
| | 1/25/2021 |
| | 7/30/2021 |
| **C** | 10/14/2020 |
| | 2/10/2021 |
| | 8/4/2021 |

questions combined from Phase 1 interview 1 and 2 protocols. Four of the five interviews were conducted via Zoom with one interview conducted in-person. All interviews were between 45 minutes to over 1 hour in length. See table 3.4 for interview dates for Phase 2 cross-sectional participants.

### *Document Analysis*

Many of the communities and societies studied through various methods are often self-documenting with little attention paid to the produced documents (Hammersley and Atkinson, 2007). This holds true for studies in medical settings which often focus on the spoken interaction of medical providers and patients or others on the medical team. However, upon close inspection, medical settings are full of reports and writings which include, but are not limited to, individual patient reports, colleague written communications, formal peer-reviewed journal articles, evaluations, and feedback (Hammersley and Atkinson, 2007).

**Table 3.4.**

Title. Interview dates for Phase 2 cross-sectional data collection.

| Participants | Interview Date |
|---|---|
| **D** | 5/7/2021 |
| **E** | 5/10/2021 |
| **F** | 5/17/2021 |
| **G** | 5/19/2021 |
| **H** | 6/22/2021 |

In attempting to gain an appreciation for the complexity and the guidelines of how a residency program was specified to operate, documents that were deemed pertinent to investigate for both the implicit content (manifest content) or the explicit (latent or intent) are the Accreditation Council for Graduate Medical Education (ACGME) Program Requirements for Graduate Medical Education document. This document contained the regulatory requirements that all graduate medical education programs (i.e., residency programs) must adhere to become accredited and maintain accreditation, and standards

which must be met for successful programs. Thus, these regulations outline and govern much of what constitutes the administrative tasks of a residency program director and/or associate program director. The requirements and standards are often referenced in observations as well as interviews, so a working understanding was important in providing context to the study. These documents are available via the ACGME website for general public access (Accreditation for Graduate Medical Education, 2021)).

Another document which molded and shaped the program director's administrative function are the ACGME milestones (2019), which "are designed only for the use in evaluation of residents in the context of their participation in ACGME-accredited residency programs" (pg. i). In other words, these provided a framework for the evolution of the resident in training, on their journey to become an independent practicing physician. The program directors used the milestones to assess the residents semi-annually and were reported to the ACGME. In addition, ACGME Program Requirements for Graduate Medical Education were reviewed. This document contains all requirements a residency program must conform and to provide documentation as evidence on meeting said requirements. Further, this document provided the framework for how an accredited residency program must be administrated to maintain accreditation, conduct a successful learning environment, and adequately train competent and autonomous physicians.

On the other spectrum of evaluation were the residents' evaluation of the program itself. The researcher attended two program evaluation committee (PEC) meetings, in two different programs, that discussed the results of the resident survey, and thus it was important to understand the items, as well as the context of the survey. For

one program, the researcher was provided all results as well as all items contained within. This meeting was attended by not only the PD but also teaching faculty, staff, and residents. The survey was used to form the basis of program-based improvement initiatives in addition to having to rationalize to the ACGME areas that were below national means as part of continuing program accreditation.

**Data Analysis**

Upon entering a research study setting or field the researcher rarely, if ever, enters without any prior knowledge of theories, studies, or hunches (LeCompte and Schensul, 2010). That being said the researcher did not conduct data collection via observations, interviews, and documents that fit conveniently into a pre-defined theoretical approach. As such, data analysis this basic qualitative research study commenced with the first interview, observation, or document, and was inductive, recursive and iterative by nature (Merriam and Tisdell, 2016; LeCompte and Schensul, 2010). The interviews were transcribed verbatim at time of interview; however, were subsequently edited for readability upon data analysis. The transcribed interview data was subsequently read to provide insight that led to further questions or hunches that were followed up with a different or same participant or at a subsequent observation. Similarly, direct observation provided questions and hunches that were followed-up in subsequent semi-structured interviews.

For the initial (Stage 1) data analysis, an inductive thematic analysis approach was used for all interview transcripts and field notes. The initial step employed was familiarization of the data, via reading and re-reading the corpus of data which enabled the researcher to appreciate the depth and breadth of the content (Hammersley and

Atkinson, 2007; LeCompte and Schensul, 2010; Braun and Clarke, 2006). Reading across the entire data set, fieldnotes and interview transcripts, bits of data that were thought to be relevant were highlighted, notes were added in the margin along with comments and ideas, which provided working concepts for the later, more formal coding (Merriam and Tisdell, 2016; Braun and Clarke, 2006). Next, initial coding or applying descriptive meaning to the most basic element or identifying feature of the data was conducted (Braun and Clarke, 2006). At this stage of coding, all possible codes were applied, thus attempting not to conform to biases or preconceptions. Once all the data was coded, the process of identifying and searching for themes was initiated. In order to achieve this, codes were sorted and collated into different and potential themes, as defined as overarching patterns identified in the codes (Braun and Clarke, 2006). In addition, at this stage the researcher looked for relationships between codes, themes, and potential sub-themes.

Once candidate themes had been developed, a review process was initiated, looking for themes which were able to be collapsed or edited, themes with not enough supporting data, or themes that needed separated (Braun and Clarke, 2006). Braun and Clarke (2006) describe two levels or goals at this juncture in thematic analysis. Level one was analyzing the themes to ensure the coded extracts of data for a "coherent pattern." In other words, the themes were meaningful, but distinct from other themes (Braun and Clarke, 2006). In level two, the researcher looked to see if these candidate themes accurately reflected the meaning of the entire data set. If not, the data were re-coded and themes were further refined, as qualitative data analysis was recursive by nature or non-linear. The final aspect of thematic analysis was to "define and refine" to identify the

meaning as well as what story the theme conveyed about the data (Braun and Clarke, 2006)

All interview transcriptions, written fieldnotes, and documents were in form of a PDF or Word document, which were either directly uploaded or typed into a OneNote (© Microsoft, 2016) notebook for data analysis. The notebook had a section folder for each participant, with a separate page for each interview transcript and written fieldnote. A section folder was created that contained all PDF and Word documents used for document analysis. In keeping all of the text data within OneNote, this allowed the coded bits of data to be searched across and within folders, thus it facilitated comparison of codes. After the initial familiarization, note taking, and initial coding was completed, all transcripts and field notes were imported into Dedoose Version *9.0.17*, web application for managing, analyzing, and presenting qualitative and mixed method research data (Los Angeles, CA: SocioCultural Research Consultants, LLC, 2021). Once all of the data was imported into Dedoose, (Los Angeles, CA: SocioCultural Research Consultants, LLC, 2021) the data was coded line-by-line, followed by a developed coding hierarchy, and refined major themes with supporting sub-themes.

A second round (Stage 2) of data analysis was conducted once all data was collected and inductive thematic analysis completed. This second round of analysis was deductive in nature, by applying and mapping of the sub-themes from the inductive data analysis to the theoretical framework of Job Demands-Resources theory (JD-R) (Bakker et al., 2014). The first rationale for applying this theory to the data was this theory incorporated both job demands and job resources where job demands have been identified as the main causes of burnout and job resources are associated with work

engagement (Bakker et al., 2014). A second rationale was Bakker and colleagues (2014) state that "job characteristics can be modeled using two different categories," those being job resources and job demands. Thus, the work environment or occupation itself was of little importance, whereas the specific job demands and resources of the particular occupation enable theory to be tailored "to the specific occupation under consideration" (Bakker et al., 2014). Lastly, by analyzing the data via a JD-R theory lens, future research may build upon the findings to develop approaches to mitigate and promote engagement at the organization, team, and individual level.

## Ethical and Trustworthiness

Regardless of the research paradigm or philosophical underpinnings "all research is concerned with producing valid and reliable knowledge in an ethical manner" (Merriam and Tisdell, 2016, pg. 237). However, in qualitative research there is an ongoing debate and evolution as to how best to attribute rigor. Thus, this researcher used the term trustworthiness to connotate the meaning of validity and reliability (Merriam and Tisdell, 2016). For this particular study, several strategies were utilized to ensure the trustworthiness and credibility of results including triangulation of methods and data, prolonged engagement, thick descriptions, and reflexivity.

### *Triangulation of Methods*

As discussed in data collection, not only do observations, interviews, and document analysis allowed the researcher to gain an emic perspective, but also enhance study validity by triangulation of methods within the broader qualitative methodology (Merriam & Tisdell, 2016). Utilizing multiple methods allows for the checking of what people say they do versus what people actually do. In other words, the comparison of

what was stated through the semi-structure interview and what was observed to be congruent or bring a new and different questions to the fore. For this reason, the interview process and observational methods were iterative, both building and informing the other via conformations and/or contradictions with subsequent inquiry.

### *Triangulation of Data*

"Triangulation is a validity procedure where researchers search for convergence among multiple and different sources of information to form themes and categories" and specifically concern the triangulation of data (Creswell and Miller, 2000, pg. 126). Triangulation of data allowed the researcher to seek out and engage with multiple perspectives, instead of a single case, data point, or time (Creswell and Miller, 2000; Ravitch and Carl, 2016). Within data triangulation, Denzin (2009) describes three-dimensions that triangulation can occur: time, space, and person. For this study, triangulation through time occurred with Phase 1 participants, by both conducting multiple interviews at various time points, as well as observations over an academic year. Triangulation of space was achieved by observing Phase 1 participants in various settings (refer to Table 3.1 for detailed description of the observation settings). Lastly, triangulation data via persons was achieved by both engaging the three Phase 1 participants over a year timeframe, as well as the five Phase 2 participants.

### *Prolonged (adequate) Engagement*

In attempting to understand the participants perceptions and experiences, it stands to reason that an extended time be spent collecting data to build relationships with the participants, learning the social context and community, in addition to saturating the data being collected (Merriam and Tisdell, 2016; Creswell, 2013). Fetterman (2010) states that

"participant observation requires close, long-term contact" as such this study conducted observations as frequently as possible. For the continuity clinic observations from November 2020 until June of 2021, the researcher conducted weekly observations Monday afternoons and at times Tuesday mornings, with few exceptions, for a total of eighteen observations totaling 50 hours. Additionally, observations with participants A and B were conducted from August 2020 to August of 2021 for an additional ten and five observations, respectfully. Lastly, interviews were conducted with the same three participants over a one-year period which allowed for follow-up questions from observations and to develop relationships, trust, and rapport.

***Thick Description***

In conceptualizing "thick description," understanding of what it is not or its contrast, the "thin description" helps define the former. A thin description is a superficial description without the exploration of the underlying meaning held by community member (Ponterotto, 2006; Geertz, 1973). Thus, with a "thick description" the researcher applied the appropriate context of the social action or behavior and situated the description and subsequent interpretation of the data (Ponterotto, 2006, Geertz, 1973). Thick descriptions also "captures the thoughts, emotions, and web of social interaction among observed participants" (Ponterotto, 2006, pg. 542). Approaching this study using a basic qualitative approach, with immersion in the participants social context permitted the researcher to describe and interpret social actions in context, specifically, the varied work-environment of a residency program director. Building upon "thick description" leads to thick interpretation, and potentially thick meaning for the reader (Ponterotto, 2006).

### *Clarifying Researcher Bias (Reflexivity)*

With the researcher as the instrument in qualitative research, it was important and necessary to state and "explain their biases, dispositions, and assumptions regarding the research" with the intent to promote the integrity of the research (Merriam and Tisdell, 2016). As such, the researcher notes that they were a former program director of a Pathologists' Assistant program, providing them with a working knowledge of the multiple tasks which govern the day-to-day of a director. However, the researcher was not a physician, thus not administrating the high stakes environment in training the next generation of physicians. In addition, in gaining access to the community of residency program directors, the researcher negotiated and re-negotiated how their relationship with the participants was received. Initial observations and interviews allowed for the researcher to gain trust and comfort, thus it allowed for the eventual observation of the participants interacting with patients in a natural clinical setting. As previously mentioned, the researcher's positionality as a white male needs addressed as there was a need to recognize the power and privilege this may have in social interactions. Specifically, in certain clinical situations participants did not feel comfortable with the researcher observing their interactions with patients. Given their self-identification of a white male, the researcher was asked not to observe female patients during certain procedures, or with mental health concerns. In participant observations during patient visits, it was explicitly stated to the patient who the researcher was and that the researcher was there only to observe the participant physician. Finally, the researcher maintained a fieldnote journal, that not only contained jottings of observations, but also the researcher's perceptions, thoughts, questions, and experiences. These reflexive writings

were continued into the written fieldnotes, bracketed from the descriptive account via parenthesis or notes outside of the main body of text.

# CHAPTER 4: RESULTS

The primary purpose of this study was to explore and provide rich descriptions of the lived experiences of PDs and APDs within institutional, personal, and societal context as they experienced engagement, fulfillment, emotional exhaustion, and depersonalization within their various roles. PDs and APDs sit at a crucial junction as directors of their respective residency programs which bridges between undergraduate medical education and becoming an autonomous practicing physician. Thus, they are directing the programs training the next generation of physicians. As such, it is important to understand how they experienced fulfillment, well-being, and dedication within the context of their various roles. This chapter presents results of inductive thematic analysis aimed at answering the four research questions as well as a deductive application of data to the framework of JD-R theory.

## Participant Information

Six participants from the Indianapolis campus and two from regional medical campuses agreed to participate in this study. Three of the Indianapolis participants agreed to participate in the year-long phase (Phase 1) of the study, consisting of three formal interviews as well as observations. Five additional participants agreed to participate in Phase 2 comprised of a one-time semi-structured interview, constructed from interviews and observations with the three phase 1 participants. No demographic information was formally solicited, nor will the participants' specific specialty be provided in order to protect their anonymity. However, the specialties included primary care, procedural based, as well as inpatient and outpatient focused specialties. The genders of the

participants are four male and four females, with a range of time spent as a PD or APD between two and greater than 20 years.

**Themes of the Lived Experience of PDs and APDs**

The integration and complexity of PDs' and APDs' lived experience in the setting of their career cannot be viewed as a siloed occurrence of discreet packages of time with roles and tasks falling neatly into predetermined days and times within a day. Instead, the participants' experience should be seen as an integration of roles to be embodied as one, where their chosen career as a PD or APD was comprised of multiple interrelated parts that make a whole. Thus, their experience of emotional exhaustion, fulfillment, satisfaction, and energy gained interconnect, feed, and detract from one another in a network of lived experience. This is reflected in the four overarching themes: 1) *It takes a village*, 2) *Integration and the "hats" They Wear*, 3) *Motivation and Meaning of Their Career*, and 4) *Coping*. Viewing from an interconnected and holistic viewpoint, the narrative of the participants' lived experience was conveyed; however, first to provide context to the lived experience during the period of this study, a separate descriptive theme, "*Societal Context*," was elaborated to further appreciate the milieu this study and the experiences of the participants occurring within a unique societal context.

**Societal Context**

Within the community of residents and physicians, and the larger community of the city, two deaths of physicians of color had an impact on the experiences of participants, residents, and the academic community at large. A participant described their experience of how these deaths affected them, the residents, and recruitment of future residents:

> You know, obviously everything that happened with X and Y that's totally out of our hospitals, but it's still tied to [us] and that impacts recruitment. I didn't want to explain it or try to justify it, but I have to say something about it. So, it's just this really uncomfortable place but just kind of sitting in that discomfort, you know, it's tiring but you just have to keep on playing. *Interview Participant B*

The repercussions of these tragedies, specifically addressing concerns of potential residents were stated by participants as they directed residency programs at this institution. In addition, this speaks to a larger systemic issue of racism, gender disparity, and targeted communities within our society and especially within healthcare delivery. The gender disparity not only is part of those utilizing the healthcare system but includes those providing healthcare with some participants describing their personal encounters with gender biases. Further, participants described scenarios of potential gender bias residents may encounter. This gender disparity manifested itself by assumed traditional gender roles within a healthcare system at large and specifically within medical specialties consisting of mostly female physicians have additional barriers as compared to their counterparts as stated by one participant:

> I think it kind of is in line with professionalism something that we're dealing with now is because we communicate so much through the EMR through text and other things that sometimes we lose a little bit of that formality with how to address each other from both sides. I don't like my residents not called Doctor unless they say that that's okay, just because I think about gender roles, we need to kind of affirm that these women are physicians. *Interview Participant B*

Other events occurred within this timeframe included the ongoing COVID-19 pandemic, 2020 presidential election, and subsequent January 6$^{th}$ occurrence on Capitol Hill (The New York Times, 1/7/2021). Two different participants succinctly summarized their experience:

> Now that the election is over, I mean I don't think we realized how much the election and the administration was weighing on everyone. *Interview Participant B*

> Well, the timing was poor because I was also in the middle of COVID and in some ways that helped as COVID was stressful for all of us. *Interview Participant E*

In totality, this was only a small selection of the experienced events, and this is not an inclusive occurrence of all events, as other racially, political, and class-based instances arose during the time of this study. With the backdrop of the COVID-19 pandemic and society wide occurrences, what follows are the lived experiences of PDs and APDs, starting with communities they are embedded within as they experience their work life.

**Summary of Themes and Subthemes**

As mentioned, there are four major themes with each containing multiple supporting subthemes. Following is an overview:

1) *It Takes a Village* relates the experience of community, support, and relationships, thus a source of belonging. However, experiences of community were not always felt, resulting in the breakdown of support, community, and relationships. The former experience is supported by *presence of community* with *relationships of support team, department chair and leadership, and peer and colleagues* subthemes. The contrasting experience was encapsulated in *breakdown of community* with *failure of communication, disconnected, lack of control and decision latitude, and unsupported* as supporting subthemes.
2) *Integration of the "Hats" They Wear* relates how the participants experienced their various roles, responsibilities, tasks, both work and personal, and how the roles integrate, add, detract, and make whole their lived experience as a PD or

APD. Supporting subthemes are constituted by *roles* which entail: *advocate, educator, administrator* (further supported by *recruitment and interview process of potential residents, resident morale and behavioral matters, accreditation, resident case volume,* and *curriculum), clinician* and *workload. Integration* is further explored via *boundaries of connectivity* and *work, family, and personal time.*

3) *Motivation and the Meaning of Their Career* explored how participants managed the "ups and downs" and other aspects the participants experienced as exhausting, draining, and time consuming and the contrasting feelings of satisfaction, fulfillment and experiences that provided the purpose, resilience, and the "why" of their career. Subthemes include *task significance* with further moments of *absorption in a task, autonomy, opportunities for growth, value,* and *purpose* which is further explored through *niche* and *skill set to career fit.*
4) *Coping* relates how participants interpreted the cognitive and physical mechanisms or frameworks that enable reconciliation of job responsibilities, roles, patient interaction, and resident experience. This major theme is supported and further explored by subthemes of *feedback, cynical, "tax," emotional intelligence,* and *self-care* which is further expanded by *introspection, negative* (self-care), *positive* (self-care), and *positive framing.*

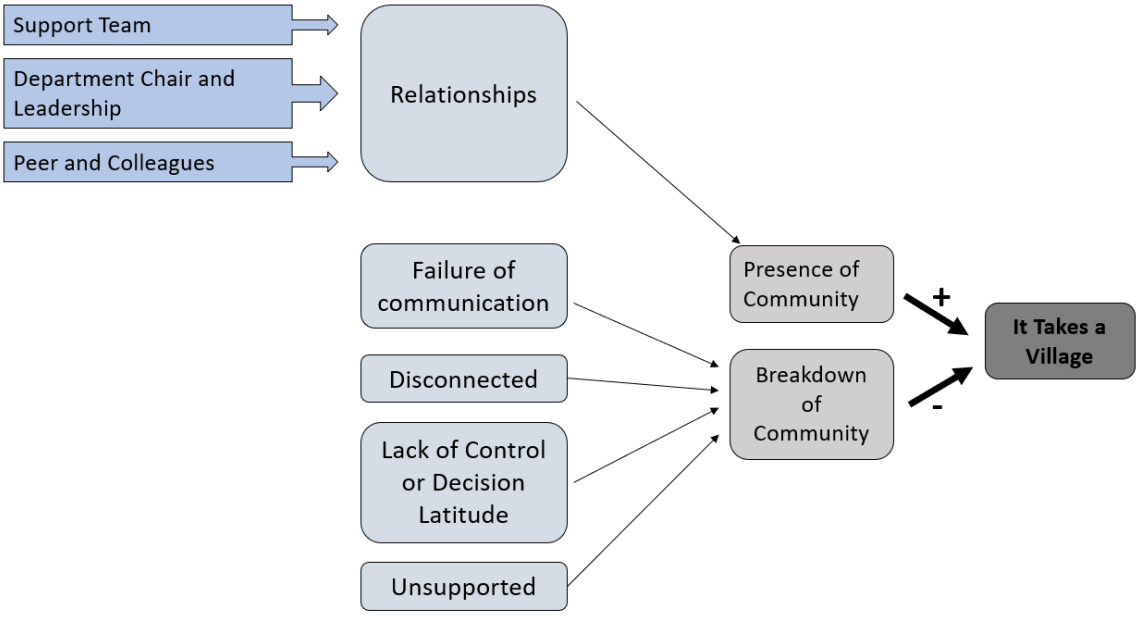
**It Takes a Village**

As one participant stated, "Yeah, you know I mean I think there's not a job you can do by yourself…" This sentiment experienced by others demonstrates how a community of support or a lack of community was part of the foundation of how

participants experienced their role as a PD or APD. *It Takes a Village* manifests as experiences of support by colleagues, administration, peers, and residents, creating a sense of belonging. In addition, the collaboration with colleagues engaged in studies, projects, or program initiatives provided a sense of camaraderie, both as mental stimulation and emotional support. This community or village offers a source of high-quality relationships to draw upon when strains arise or when the workload becomes excessive. At the opposite end of the spectrum a feeling a disconnection, ambiguity, or lack of tangible support was experienced as a sense of losing sight of their purpose and motivation to strive for either personal or program goals. As such, two sub-themes were established: 1) *presence of community* (i.e., belongingness) and 2) *breakdown of community* (i.e., lack of belonging). See Figure 4.1 for an overview of the major theme *It Takes a Village* with supporting sub-themes.

**Figure 4.1.**

Title. Overview of Major Theme *It Takes a Village.*



### *Presence of Community*

*Presence of community* involves the building and maintenance of relationships at levels within the organization to enable PDs and APDs to experience a sense of community and support which can be drawn upon to accomplish assumed roles. Thus, an experience of belonging to a community was formed via relationships with various stakeholders in graduate medical education to include program coordinators and chief residents, department chairs or more broadly institutional leadership, and peers and colleagues.

#### Relationships

Broadly, participants experienced the various relationships as sources of connection, support, and meaning as they navigated their roles. The participants described their relationship with residents as pastoral care which fostered a collaborative environment where thoughts are freely exchanged and permitted difficult mentor and mentee conversations with residents. This relationship can be a source of support and fulfillment or "pride" as expressed through the following participants experiences:

> The residents are like my kids as well. So, I have 41 other kids without being too paternalistic. *Observation Participant B*

Further, in certain instances a participant felt the pride and engagement of mentoring and guiding residents as they solved problems on their own initiative:

> I feel more like a father in that setting where you guys [residents] go and think it through and how you want to do that, it just makes me fatherly proud in a way, if they implement something but it's a different type of engagement… *Interview Participant H*

This sense of camaraderie was even extended from residents to a participant, as a demonstration of how the residents viewed their relationship with a participant and the show of support in a challenging situation:

> I think this is the first time I've actually been old enough to be their father. And I told you I got screamed at when I was at the podium on July 1 last year. They [the residents] came up to me and said, "you know, you're like a dad. They can't treat you that way." And that's the first time I've ever heard that. *Interview Participant D*

These various relationships (i.e., administrative, resident, fellow, colleague) were a source of community to their career and were experienced as a source of identity formation and affirmation. As already mentioned, one participant elaborated on how the surrounding support system was utilized as a source of affirmation:

> Yeah, I mean I think there's not a job you can do by yourself. And so, the program director for medicine is a good friend… that I can always bounce things off. Nationally I have developed several relationships and have really good sounding boards, kind of all over the place and different people for different things just like the rest of life. *Interview Participant A*

Exploring *relationships* in a more nuanced manner revealed the participants drew upon mainly three groups of community members for support and fulfillment. The groups are administrative, which in itself encompasses program coordinators [individuals who assist in administering the day-to-day task of the program (i.e., resident credentialing, resident interview coordination, organize and track resident documentation of duty hours etc. for accreditation purposes)], chief residents, and associate program directors, thus forming a collective *support team.*

***Support Team***

Participants recognized and appreciated directing a program requires support from a competent and dedicated program coordinator. Program coordinators are often in the

shadows and working behind the scenes as a liaison between resident's questions, concerns, or conflicts, and the PD or APD. These individuals organize resident interview schedules involving coordinating multiple faculty which was especially crucial given the interviews were conducted on a virtual platform. In addition, months prior to onboarding new residents for orientation, program coordinators administered and communicated with residents to ensure their credentialing process was completed, thus allowing new residents a seamlessly transition into their new role. As one participant described, program coordinators may not be physicians, but they are everything else, and were a direct extension of the program director:

> Yeah, our program coordinator is amazing. I would argue I have probably the best coordinator in the country. She's very technologically savvy. She's very creative. She's very educated. She's talented and can take the ball and run with it. You know, she's not a surgeon, but she's everything else. And so, I think that's really helpful. *Interview Participant A*

Another participant further recognized the working relationship with a competent program coordinator allows the residency program to adequately function, and by extension reduced the amount of time the PD or APD expended towards program related tasks:

> Yeah, so we hired a very talented program coordinator but she started in November last year, which has been in the role for less than a year. So, I feel if I was in role for five years, or had a program coordinator who's in their role for 10 years, the job would take up a third of the time probably. *Interview Participant H*

However, this same participant appreciated and was thankful for having the program coordinator in place to assist with resident interviews:

> So, I think it went well. [Resident interviews] went well because the new program coordinator is a very reasonable and organized person. *Interview Participant H*

The task of coordinating, developing, communicating, and organizing schedules for up to 70 or 80 residents at various clinical sites for an entire year often falls to chief residents. These residents are often in their last year prior to becoming fully autonomous physicians, and are voted on by peers as well as faculty for this responsibility. A participant described the complexity and the challenging position of a chief resident, but at the same time having chief residents allowed for the program director to allocate energies elsewhere:

> All right, you have the ministry of chief residents... to organize vacation schedules and call schedules and things like that, and So [name], are your administrative chief residents. They have a really hard job. Just keep in mind they're trying to organize, somewhere between 70 and 80 different times, being all over the place. *Observation Participant A*

Program directors draw upon another group, associate program directors, who have the responsibility of administrating, coordinating, and developing certain aspects of the overall residency program curriculum, such as formal didactic sessions, oversite of ambulatory care, or surgical skills. Participants appreciated and acknowledged the strengths of their APDs which allowed them to flourish with the added benefit of taking on tasks participants feel they can pass along. The following experience described by a PD participant of enabling an APDs to flourish and develop trust:

> The other Associate Program Director and core faculty really, like to teach so they manage little portions of the curriculum: journal clubs, simulation training... *Interview Participant F*

Another participant described how as they evolve in their role and develop comfort, they themselves felt at ease delegating tasks and trusting those other than themselves to get the tasks completed:

> I sometimes have a problem letting go so that's something I'm working on. But, as I understand what is actually needed for a lot of these things then

> delegating to assistant program directors or our chief residents that have a little extra time. *Interview Participant B*

With one participant being an APD, they expressed their experience of how institutional structure or hierarchy has shielded them from some of the challenges facing PDs. In addition, the following quote highlighted the team dynamic of administering a residency program, and thus the inherent complexity, with individuals assuming their various roles and relieving the strain on others:

> I think that maybe there's probably two things going on. One, is I'm sheltered or shielded from a lot of this because I have an amazing PD, and an amazing program coordinator and assistant coordinator, so I feel like the hierarchy is shielding us from a lot of that. And we're always asking them to take, can we do something [name of PD] can we take something from you. So, I feel like the PD role is huge there. *Interview Participant C*

Collectively, the support team surrounding PDs and APDs created the space to provide opportunity to empower those in their community to take on task for the residency program so they themselves may excel by enabling the PD to engage their cognitive energy and time in other endeavors.

***Department Chair and Leadership***

The department chair's role in support, involvement, and trust can be drawn upon if the PD or APD needed an initiative or buy-in from others in the department. As one participant described how they experienced support from the department chair was vital in conveying a message to others within the department about the residency program:

> They are helpful. Our chair was very supportive in that time and has done a good job of helping…whenever you realize people wouldn't listen to me. *Interview Participant H*

When the department chair placed value on education, it allowed the proper time allotment for PDs administrative time which was viewed as helpful and supportive. One

participant expressed their experience being a PD in a department where education was valued, and how this may raise the bar, but was viewed as a positive motivating factor:

> I think from a program perspective I have broad support. Education is very important in our department and the chair is a well-recognized educator. And that's awesome as a program director to be able to work for somebody like that and then it also raises the bar, a good bit. So, I think you could argue it's a double-edged sword it's mostly a really good thing. *Interview Participant A*

Another participant described their time allotment:

> Department chair, is great I think that my 50% is respected I can't do the same for other program directors, but my 50% is, you know respected within my clinical duties. I think if I really needed the time I would feel comfortable asking for it. *Interview Participant B*

Participants recognized that support manifested in variety and amount from institutional leadership and the department chair and further varied between individual and situation. One participant, reflected on past experiences, expressed how at times they wanted more support but appreciating, at times, the best support was freedom:

> I mean in any position that's always a little challenging, I don't think anybody will ever say everything is just perfect. I feel you would always want more support from your bosses, and it's also clear that some bosses are more supportive than others… sometimes the best support is to get the freedom. And you know that's something you often. I appreciate more on the long term and the short term you feel you might appreciate as much as you feel different levels of support might be more valuable, but maybe the truth is sometimes the freedom is the biggest support you can get. *Interview Participant H*

Regardless of the amount of support, or by what means, experiences of receiving tangible support for the residency program inferred support of PDs' and APDs' career efforts, initiatives, and time, by proxy. Participants experienced an awareness of their standing and cognizant of how the department leadership viewed their job roles. This may have

been perceived as a means of feedback and how participants fit into the larger structure of their respective departments.

***Peer and Colleagues***

Peers and colleagues are viewed as "sustaining," by providing a resource to discuss what commonalities of their shared experience, especially during the COVID-19 pandemic, as many of these relationships had been lost, diminished, or limited to a virtual platform. A participant shared their experience at a conference which provided the opportunity to converse with those PDs from institutions other than their own:

> And I would say that is the sustaining group. And, you know, we had an in person meeting this year, which we were right on the cusp of meetings, sort of happening again. So, it was in April, and it sounds silly but honestly seeing other program directors and, you know having a drink with somebody else who's doing the same I think it's actually really meaningful and it's good to be on the inside of that a little bit *Interview Participant A*

Another participant experienced support from an outside sustaining group, where this community was viewed as a resource:

> Um, no, we have a relationship with the Southwest [state] Consortium, and so they are a great resource. If I need to know something about things. And I think that since they are only a few years old the question is how is that consortium, gonna evolve and what services are they going to provide. *Interview Participant F*

The support of peers and colleagues goes beyond other PDs, either from within or outside their own institution, to include those associated with their clinical duties. This often came to the forefront with patients presenting with complex situations, with a need for a nuanced, specialized, and personalized care plan. During an observation, a participant conversed with a patient regarding how conferring with their healthcare provider team would ensure the patient received appropriate care:

> [participant] states she sees [the patient] is scheduled to see the endocrinologists in a week and will send them a message to make sure that they talk to him about getting setup with the continuous monitoring. She explains, that with type 1 diabetes it is complex to manage glucoses so she will allow his "diabetes team" to make that decision. *Observation Participant C (Fieldnote)*

Being surrounded by peers and colleagues, who are specialists, allow patients to see those who have the expertise in providing nuanced and personalized care, and furthermore allowed the current study participants to engage in what they do best, thus allowing them to find their work to be impactful:

> Yeah, so it aligns super well and I realize this all the time because I work in a situation where I'm on a team, and so it can turn a lot of things that I am not an expert over to my team members. So, I am not very good with like memorizing formularies. I think my triage nurses are better at triage than I am. Like who really needs to be taken care of. Today, I would go crazy if I had to do all my own triage and social work. I'm not great at assessing social determinants of health and putting them in a hierarchy and getting them to where they need to be. And so, working in an [large healthcare institution] really aligns with my values because I want to, educate, motivate diagnose and treat. *Interview Participant C*

Through the various relationships with leaders, support team, and colleagues the participants created a sustaining community. Subsequently, the contrary experiences when this community was not created or was not a source of sustained relationships was considered.

***Breakdown of Community***

When a community, support team, and colleagues were drawn upon as sources of meaning or nourishment, the question arose as to what was experienced when the community was not present, or when there was a *Breakdown of Community*. Through a failure of communication, ambiguity was experienced as a source of strain and frustration. On top of ambiguity, a lack of communication conveyed a feeling of being

unsupported, in part due to the COVID-19 pandemic restrictions, but nonetheless further fracturing the community. This feeling of lacking support was experienced both as a lack of tangible support in handling conflict or hindrances to their educational mission via a failure of both discourse and action and arising from both educational and clinical leadership. Even if participants felt tangibly supported by their immediate leadership, it did not overcome the experience of voice reduction or lack of representation in a large institution, thus resulting in feelings of losing control over their own career trajectory or outcome.

### Failure of Communication

*Failure of Communication* was twofold: 1) between the institution or organization at large and participants, and 2) between the accrediting body (ACGME) and the participants. *Failure of communication* between these various parties was manifested as breakdown in understanding as to what was required of participants to meet accreditation requirements, especially with the fluid situation of COVID-19, and as frustration in a large academic institution where disparate parts are not communicating. A participant experienced an incongruence between the goal of ACGME yearly program surveys during COVID-19 and what actually materialized as the ACGME's policy:

> So ACGME guidelines, well one, I didn't think the surveys were helpful last year, right COVID and everything [ACGME] "saying, you know, we're [ACGME] trying to be understanding" but then there was no understanding. So, I think that was unfortunate with the timing on all of us. *Interview Participant E*

Participants described how a breakdown in communication was exacerbated by how the ACGME provided inadequate communication pertaining to accreditation requirements which are often open to multiple interpretations. This added a layer of

complexity and uncertainty in the task of ensuring guidelines were not missed, thus introducing ambiguity. One participant described how this formed a barrier in their ability to properly execute their duties as the residency program director:

> No, I wouldn't say the ACGME is particularly good about communicating things, you know they send broad communications to everyone. And so, for example this year. There were some proposed program requirement changes that were proposed in December, and then there was a period of comment, and that comment period closed at the end of January. And then there was no other conversation. And then the new requirements were July 1 and it was all buried in the bottom of an email that you know all these proposals for all the programs with proposed requirements, now have new requirements. Right so it's not like they send any specific information to specific relevant programs, if that makes sense. *Interview Participant A*

A specific situation where a participant experienced a sense of angst and ambiguity was how the ACGME interpreted caseloads (i.e., the required number of procedures completed by residents) would be carried forward during COVID-19 with the disparity between the reporting timeframe of the ACGME and the fluidity of the evolving COVID-19 situation. As described by one participant:

> Put an asterisk by everything for this year with COVID. We don't really know exactly how they're [ACGME] gonna view our caseloads and everything in light of COVID annual kind of application and review thing is due in the end of September. And then, the problem is we don't get it back until February, so you have this six-month period wondering are we doing okay are we not doing okay and it's hard to pin it. Then you only have three months, three months left of the academic year. *Interview Participant B*

Participants described not only a lack of communication with the national accrediting organization, but a comparable communication breakdown or lack of voice occurring within their own community. A participant described their experience with a lack of voice and the resulting frustration in attempting to navigate the complexity of a large academic institution:

> You know, I think a large organization does have trouble sometimes communicating amongst itself. So, I'm on the med staff leadership, and the right hand, the left hand, the right foot, and the left foot, they don't all work together. And that's frustrating. *Interview Participant A*

As is the situation with the other academic medical centers, this study was conducted in a large, multi-departmental, and geographically diverse institution. This adds layers of complexity to the hierarchy and leadership structure thus added opportunities for a breakdown of communication, and further relationships may suffer if the community is not viewed as a sustaining force. Adding to this communication complexity, according to the AAMC website (2021) the ACGME oversees close to 200 accredited specialty and subspecialty residency programs with a total of approximately 140,000 active residents (combining both MD and DO residents). Documents provided by the ACGME such as: ACGME Program Requirements for Graduate Medical Education (specialty specific requirements); The Program Directors' Guide to the Common Program Requirements (Residency); ACGME Case Log Minimum Numbers (per specialty); ACGME Milestones (per specialty) which provide caseload minimums, allocation of support staff, and other program specific guidelines adds to the inherit GME complexity as well as specialty specific complexity (ACGME, 2019, 2020). Specifically, the Program Directors' Guide is stated as "a living document that will regularly and periodically be updated." Thus, communication and attention to updates and adjustments to these requirements was required to ensure the residency programs are adhering to the most recent changes and updates.

**Disconnected**

*Disconnected* was as a lack of belonging and relatedness to those community members the participants find meaningful and supporting. Thus, the pastoral relationship

with the residents that enabled the experience of connection or belonging, when removed participants experienced a sense of losing purpose of the role as program director as to why they do what they do. A participant described the impact of being engaged in purely administrative (i.e., emails, accreditation documentation, evaluations) tasks as:

> I think when I don't have that resident contact and I'm just doing administrative things it's easy to lose touch with the overarching mission and what your goals are. *Interview Participant B*

Another participant experienced the challenge of going to a virtual environment and by extension missing the direct resident interaction stated: “But it meant that I kind of went virtual with the residents, which I found hard.” *(Interview Participant D)* These results underscore the impact of contact with residents in experiencing purpose.

The experience of being disconnected was exacerbated by the ongoing COVID-19 pandemic and manifested as a physical distancing of the support team with fewer times where interaction was feasible. Paradoxically, a participant described how prior to restrictions it was challenging to get all parties to agree on a time and be present for a meeting. The virtual environment altered this dynamic so finding a time to meet virtually was easier, but how “present” were those parties in the meeting was another matter:

> What's interesting is that before COVID it was hard to get people all in the meeting at the same time because of competing clinical responsibilities and just general life business. Now you can get everybody in the same Zoom Room, but many people don't have their, actually most people don't have their camera turned on, and you have no idea if they're paying attention or contributing or anything and there's no sense of personal connection in that situation. *Interview Participant G*

Participants experienced fragmentation of their support team, particularly in the setting of COVID-19 the dynamic of the support team had been interrupted. A participant

discussed the decrease in frequency of “check-ins” and feeling of camaraderie given the “remote” working conditions prompted by institutional guidelines:

> I feel like we've been fragmented. I feel supported in other ways, good people surrounding me, but I think we've been so fragmented and like not in person that I've definitely lost not lost, but the camaraderie, the check-ins, you know, they're just, not happening with the same frequency…So, that's been, tough and I think everybody's just doing what they can. And it's, if you don't hear from somebody for a while. It's not as unusual, either because it's like, oh, they're just working from home and I'm sure they're fine. *Interview Participant C*

In combination or in isolation, this experience of a disconnected community and a lack of communication, representation, and/or voice was seen to further manifest as a lack of control and decision latitude to some participants.

**Lack of Control and Decision Latitude**

*Lack of Control and Decision Latitude* was described as an experience when a participants’ voice was not respected or valued, either in their immediate community or in society at large. Furthermore, when the participants were embedded within a large institutional setting, they at times experienced a sense of isolation or challenge to affect change when they perceived they only being a small cog in a much larger organization:

> I feel support it's just, again, it's hard. It's hard to make change because there's so many different venues. I only have control kind of my immediate residency… *Interview Participant B*

Not only did they find it challenging to address change in their residency program, but further to initiate change for larger initiatives such as addressing health care disparity, racism, and death as a result of biased healthcare, as expressed by a participant:

> I mean it’s been hard. You have that layer on the backdrop of COVID, and it’s like overwhelming at times. I think probably the hardest part is just you don’t have control, you can’t fix anything, you can’t reason your way out of death, you can’t reason your way out of racism, so it’s really tough and you know I think just the nature of our institution is it’s very siloed

> you have [hospital] you have [adjacent hospital], and you have the school of medicine. *Interview Participant B*

Further, some participants discussed their experience of inheriting a residency program, thus inheriting conventions, residents' expectations, and deficits, while having little or no control over those previous PD's decisions. A participant discussed this reality and the effects of lacking control over the previous decisions of their predecessor:

> So, when I started as program director I inherited, the prior program director's surveys and issues and things and so now I have, these citations I have to reconcile I didn't necessarily have any input in in preventing. So that's frustrating. *Interview Participant B*

The experience of lack of control and decision latitude led to further experiences of being a replaceable cog in a machine of the larger healthcare system and feeling unsupported.

**Unsupported**

Experiencing a lack of support *(i.e., unsupported)* was experienced in a multitude of events described by the participants. One experience of feeling no support was how the leadership of their clinical department as described by the participant as a cog in a much larger machine. A participant described an encounter with their leadership and sarcastically expressed their sentiment:

> When I first started as faculty. We had a clinical director of services that very much. We felt reflected the mentality of [institution] administration, which was, you're all cogs in a machine. We even had this person say to us during a division meeting with you know the 12 or 13 of us there. You all have to realize that you're all completely replaceable. I found very inspiring… *Interview Participant G*

Therefore, to be efficient, highly functioning, and productive the above participant expressed that much of their daily tasks rely upon others to perform at a highly competent and efficient level; however, this participant described how they, along

with colleagues, have scarcely any authority to initiate change in those other areas of the institution. With the structure in place, the participant shared their feelings of a lack of autonomy, a loss of their voice, and ultimately, unsupported:

> So, there are many things that our efficiency depends upon that are not under the control of our department but under the control of the hospital system. The techs and how good of a job they do, we can tell them our opinions about things, but they ultimately are not under the same authorities. They're under the hospital and not answerable to us, really. And some have a lot of pride in their work and do good work and make our jobs so much easier. That's one thing and then the IT side of things is also something that we are so incredibly heavily dependent on working well. But it's not under the control of our department. So, there's like one guy who is the guy that does our IT for 150 [specialty] and, it's insane to have to have that set up at the hospital system has no incentive, besides just us complaining. There's no point, they don't have any financial skin in the game, they're like, well, you just need to do your work. *Interview Participant G*

One participant provided an analogy for their experience of being unsupported by institutional leadership by relating it to the biblical story of Exodus (5:7): "Ye shall no more give the people straw to make brick, as heretofore: let them go and gather straw themselves" but still require the same number of bricks as before. The participant stated:

> Are you familiar with, like the, the biblical Exodus story, even a little bit? [a little bit, yeah]. So, in that it feels a little like I don't know if you know that like the at some point in that story, the Pharaoh tells, the Israelites to make more bricks but now you don't get any straw. Okay, you got to get your own straw together and it sometimes feels a lot that the hospital system can do that because their financial setup is like you told us you do this work, right, you told us, and we are paying you, right. *Interview Participant G*

Thus, this experience reinforced the participant was just another replaceable cog in a machine which will continue with or without their presence.

Besides a lack of support with clinical responsibilities, some participants experienced a lack of initiative and enthusiasm from the program coordinator which

manifested in feelings of lacking support towards the participants' role as administrator within the residency program. One stated as such:

> So, she has been with us for a year solo. She gets things done, she's fine, but she tends not to like to provide updates on what she's doing. And I just find it. There's, no enthusiasm for the job. *Interview Participant G*

Further, financial backing from the department was experienced as stated by a participant at times they felt the monetary funds need to be raised solely by the education team:

> We do have a joke about like having to have a bake sale to buy something new because we don't actually have a pot of money. They don't give us money each year. *Interview Participant C*

Thus, support was not only with persons from the community but additional monetary, tools, instruments, and non-human capital goes into supporting the participants. Two participants who were PDs at a regional medical campus (RMC) shared a unique perspective in terms of support or lack thereof. Their campuses were geographically separate from the administration and leadership of the institution at large. The first participant from an RMC described rhetoric from the leadership does not match their actions:

> How do I put this, yes and no. Yeah, so no I have regular meetings with the deans Dr [name] and Dr [name] checking in and making sure [town] is, having everything we need. Although interestingly I asked for some guest lectures and Dr. [name] Oh sure, right, and I get sort of stalled by the chief residents. Well we're not sure that our faculty can do this so we'll send this on to another person. And I said, really, with, [current institution] but it is okay I've run into that or the big organization before so we'll just see if anything comes from it. *Interview Participant F*

The second participant from an RMC experienced no support from the larger institution when they encountered antagonistic behavior from leadership from the local healthcare system where the residents conduct their training:

> But you know, when, you're trying to do the best you can to keep the program accredited, bringing all of the residents along. And then the faculty, I can live with faculty who don't care, you must know faculty who don't care. But, when they decide it's their job, to be the, voice of antagonism, I've had it intermittently in the past. This is the first job I've ever had, where there was nobody in leadership, who had my back about those sorts of things. *Interview Participant D*

This same participant from an RMC who experienced the antagonistic behavior from the local healthcare system contemplated resigning from their position:

> Somebody who had screamed at me previously and in private about the fact that he thought that it was a boneheaded move to put a residency there. And it's just incredibly contentious up there. I almost quit a few months ago. I've been doing this for a long time. I've been leadership in the Program Directors Association. I get, offers, all the time. Somebody called me up this week to ask me about a job. And I'm trying to stick it out for the residents. I'd love to get through the first-class graduation. *Interview Participant D*

Further, this participant experienced this situation as being at a low point of their career as a PD and dissatisfied as they further state:

> When this whole thing erupted with [antagonistic hospital] they [medical school educational leadership] just let me flap in the wind. And for the first time in my life, I've really been treated like dogmeat if you're asking for the most dissatisfied I have ever been in my life, it's pretty much right now… like I said, I worked for the largest hospital in New England for almost 20 years. I worked at the [name of institution]. I worked in the [clinic], which is the largest hospital in [state]. And now that I'm an [current institution], this is the first time Educational Leadership I don't feel supported. *Interview Participant D.*

The experience of not having support and a breakdown of community for this participant was experienced as tipping point of wanting to resign. Although, the relationship with the residents enabled and motivated them to endure this distressing event.

Another area where participants felt a lack of support was in the personnel who were available to assist with directives decreed from the ACGME. A participant's

experience with the ACGME was one of being asked to do more and more, with a mismatch in the resources available to meet those requests, as they stated:

> I think that's part of it is that oftentimes many of us are just asked to do more. And at some point, you got to trim some fat and figure out where your priorities are and COVID let people do that, right. And this is one of the places like I said from ACGME perspective, the ACGME is the one that's always asked me to do more. And that gets exhausting when you don't have any resources. *Interview Participant A*

A *breakdown of community* as from the experiences of participants manifested from multiple areas from which if present represents a community to be drawn upon for support and belongingness. As the participants described, the breakdown of community arose via a lack of communication, often leading to a sense of ambiguity, a sense of disconnection vis a vis isolation and removal from those communities which they draw upon for support as they are embedded in a large AMC. A combination or in isolation of any one of these experiences manifested as a feeling being unsupported by the clinical leadership, institutional, or ACGME, inasmuch feelings of dissatisfaction, exhaustion, cynicism, or just another replaceable cog in the machine. Table 4.1 summarizes and provides an overview of the major theme, *It Takes a Village*, with supporting themes.

**Integration of the "Hats" They Wear**

*Integration of the "Hats" They Wear* was constructed around how the participants experienced their various roles, responsibilities, tasks, both work and personal, and how the roles integrated, added, detracted, or made make whole their lived experience as a PD or APD. The roles they assumed range from those directly related to the residency program such as administrator, resident advocate, mentor, and educator, but also their role as clinician providing direct patient care. Further, the role of administrator was

**Table 4.1.**

Title. Summary of Major Theme *It Takes a Village.*

| **Major Theme:** *It Takes a Village* | | |
|---|---|---|
| **Subthemes** | **Sub-subthemes (supporting subthemes)** | |
| Presence of Community | Relationships | Support Team |
| | | Department Chair and Leadership |
| | | Peer and Colleagues |
| Breakdown of Community | Failure of Communication | |
| | Disconnected | |
| | Lack of Control and Decision Latitude | |
| | Unsupported | |

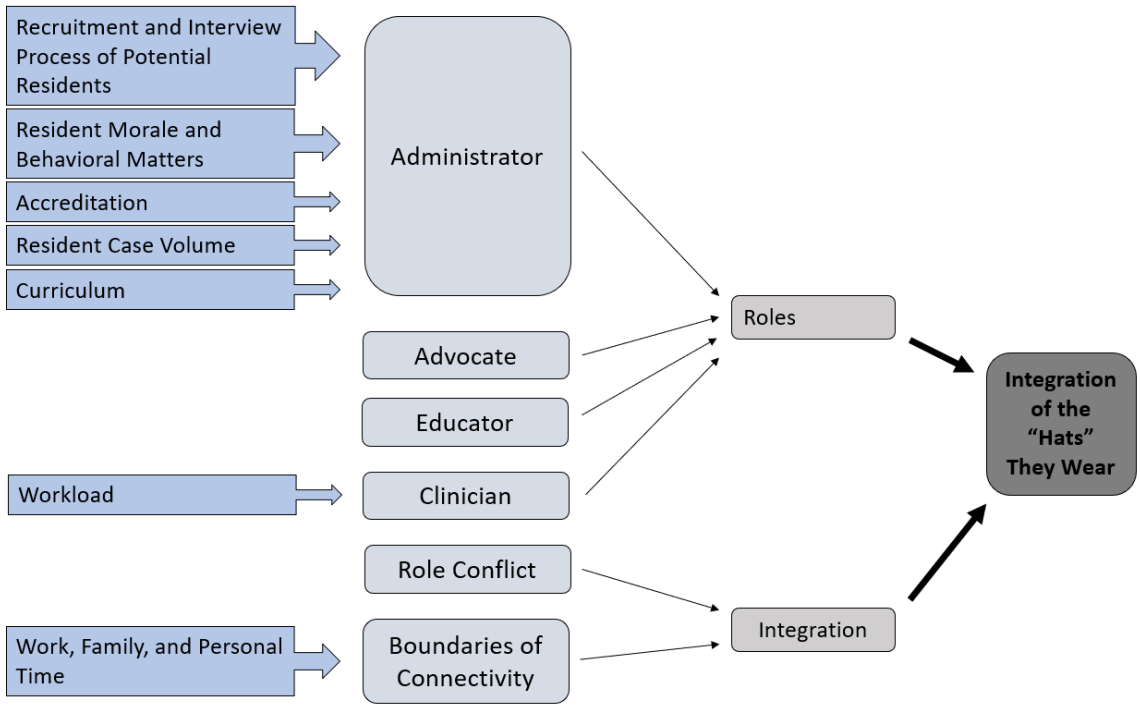
multifaceted, comprising responsibilities or tasks related to accreditation, recruitment and interview process of potential residents, resident case volumes, curriculum, and resident moral and behavioral matters. When assuming the role of clinician, the workload as a clinician was a major component of their experience, thus constituting a sub-theme. As a participant described work-life balance was a concept which may be better described as integration, as work- and home-life often become blurred:

> Then it does spill over to nights and weekends when he needs to, and so for me again I think part of it is just understanding that it's not a job that you can do in a set specific period of time, and I think administrative jobs are not like that anyway. And it's a mistake when people think that they are like that because most things do spill into your personal, family, even your clinical life. And so, there are weeks of nothing happens and there are weeks shit hits the fan… *Interview Participant A*

Thus, a balance was a challenging expectation for participants to meet, but integration of the various work roles as well as home and family life was one approach to describe their lived experience as a program director. See Figure 4.2 for an overview of the major theme *Integration of the "Hats" They Wear* with supporting sub-themes.

**Figure 4.2.**

Title. Overview of the Major theme *Integration of the "Hats" They Wear*




***Roles***

*Roles* as defined for this study are those tasks, functions, and duties the participant is assumed as their ultimate responsibility of as part of their career as PD or APD. Thus, these roles were: administrator, educator, and clinician. The following sections explore how these various roles coalesce, integrate, and mold to form their career.

**Administrator**

The role as *administrator* was an umbrella role, which encompassed many functions, tasks, and oversight for which the participants were ultimately responsible or as a participant stated, they "organize and implement all the educational opportunities for the residents." *(Interview Participant A)* The amount of time and cognitive energy required to complete the tasks was often challenging to appreciate until undertaking the

administrative role. As such, some participants experienced one administrative task following the next in quick succession, and never felt a respite:

> Um, it just feels like you're never caught up. We do our orientation and graduation in June and then July is like the first month of clinical things, there's always kind of hiccups with that. And then you jump right into interview season. And then you have a little bit of a break, January February like into the spring to regroup until you focus on maybe program improvement. Do I have a specific project to tackle this year to make things better. But it just seems like there's one thing after another and it's never a rest moment. *Interview Participant B*

With the number, variety, and overlapping nature of responsibilities, one participant (and others had the same experience) expressed that being a PD was more akin to being a human resources (HR) director:

> It takes a fair amount of time a lot of my buddies, across the nation we get together, we say instead of being called program directors, we should be called HR directors which is really what we are, so it takes a fair amount of time to be an HR director… *Interview Participant E*

Another participant described the bureaucracy of administering a residency program often adds time and complexity to any given task:

> So, I guess, HR disciplinaries the biggest, then the usual frustrations and things just take longer. They can include things like red tape or can't believe how some of those things are set up that you need. Why does it take so long? Yeah, I think you get used to that. *Interview Participant H*

To meet this time demand, as PDs and APDs participants were allotted a portion of their full time equivalent (FTE) towards administrative time. Furthermore, it was a requirement stipulated by the ACGME to allot PD and APDs a portion of their time towards the program. Of note, each specialty accredited by the ACGME has a unique allocation of FTE allotted for the PD and subsequently differing FTE amounts for the support team (i.e., program coordinators, APDs). A participant stated how their time was partitioned and affirmed administrative tasks do require the amount given:

> Yes, I am only 20% clinical and the rest is administrative and teaching, and it really does take that amount of time to, you know schedule 15 residents and make sure all your policies are aligned with the ACGME. In family medicine, we're expecting a big rewrite of the standards coming in August, so next year we'll be preparing for whatever new things they sort of throw our way. *Interview Participant F*

Consistent with equating the experience of administering a residency program to a director of HR, administrative tasks were at times viewed as barriers preventing residents from having a successful, engaging, and positive experience in the program. A participant expressed their overriding mission was to remove barriers to allow residents to become successful, and one such barrier was administrative tasks; thus, her role was to ensure the administrative tasks were completed (i.e., removal of this barrier), so as to not become a hindrance put upon residents:

> I feel like that's our overriding mission, if you lose that part then, you know, I think, all the administrative crap in some ways can be seen as some of those barriers and so trying to make sure that the educational program is meeting the needs of the current, whole physician. It is irritating to check some boxes. *Interview Participant A*

The negative sentiment of "administrative crap" was similarly expressed, if not more strongly. Another participant described needing more time:

> I mean I wish there was more days in the week. Program directors for our specialty are mandated 50% protected time. So, 50% is going to automatically be administrative. And so, catching up on paperwork and accreditation and all that and their lecture schedules etc. Unfortunately, a lot of the time which I would say is not the fulfilling time. *Interview Participant B*

As stated by participants, up to 50% of their time was devoted towards the residency program, thus much of their time was focused on residents, ensuring their success, competence, and ultimately becoming autonomous physicians, not to mention maintaining an accredited program, the recruitment, interview process, and selection of

the residents was critical task within the larger role as administrator assumes. Further, the congruence between the resident personal characteristics and those of the program were crucial for the success of both parties as participants described their experience with resident "behavioral matters." As such, the next section discusses the experience of PDs and APDs as they recruit and interview potential residents.

### *Recruitment and Interview Process of Potential Residents*

The process of selecting an incoming class of residents is initiated with the process of recruitment, often focused on populations of medical students who are underrepresented in the medical profession relative to their numbers in the general population, such as Black, African American, Latinx, and Indigenous persons. Depending on the region and specialty this may include persons who identify as male, female, or non-binary. Given the geographic location of the institution for this study, another added barrier to recruitment, as experienced by a few of the participants, was recruiting students underrepresented in medicine. As one participant described:

> I'm going to be very frank. This is a group that I need to be frank with I will we do a sort for under-represented in medicine. And that's all US graduates and so I will look at them first. Because I do believe in diversity. It is important. It's challenging. In [state] and so I do offer some initial consideration there. *Observation Participant A (Program Evaluation Committee (PEC) meeting, direct quote)*

Participants further described how perception of the city, state, and climate were barriers the PD and APDs had to overcome. Exacerbating this barrier was conducting interviews on a virtual platform. Prior to the COVID-19 pandemic all interviews were conducted in person, which was thought to be a benefit as potential residents could see the state-of-the-art facilities, training program, group dynamics, along with what the city actually has to offer. As described by one participant:

> So, we all kind of felt like [city] is a hard sell for people who don't have connections to this area. It was funny to hear you say that the reason that he came here was because his wife is here, and we have an amazing training program like how much of this is like my recruitment hat that I'm wearing now. I feel like there are a ton of positive things about the program and probably if we were a program on one of the coasts, we would be one of the most desirable places to do training. [city] makes it very difficult because people in areas that are farther away than a state or two tend to think of it as flyover country. *Interview Participant G*

Another participant described the stress the virtual format induced given it may be challenging to convey the group dynamics of the program:

> Kind of the stress of it for me is always like the do they like us. In general, we tend to wow people more in person when they can interact with us and see that we're normal and our residents are normal and have really great camaraderie, but it's hard to do that on a virtual setting. So, my concern is, are they going to like us are we going to have a strong match. So, only time will tell. *Interview Participant B*

For the actual selection of medical students who are invited for an official interview, it was as one participant described a "black box," with each program having their own unique criteria. The absolute number of applicants to sort was a daunting task, with one participant describing, during a PEC meeting, the number of initial applicants they will have to sort in order to select those they want to invite:

> So, ERAS [Electronic Residency Application Service] opened up this year on the 26th of October. And at that point, we will have MSPEs [Medical Student Performance Evaluation] as well as their full application letters of recommendation, transcripts, personal statements, CVs, etc. I will admit that generally speaking, I eliminate international graduates, including us citizens of international medical schools, unless they're affiliated with [medical school], such as the people who have done research with us people who we know already or who know a faculty member have a direct contact with us. I will eliminate those off the bat. This will leave about 800 to 900 applications of US grads. [Program Coordinator] does a lot of additional sorting, and we eliminate major red flags that are easily identifiable on ERAS. *Observation Participant A (PEC meeting, direct quote)*

Not only was this time consuming, but the perception, prestige, and optics of the program, which was ultimately the responsibility of the current study participants, was at stake in selecting residents who will be successful. As such, the resident to program congruence was a major component of this success. As a participant stated when all residents' spots are not filled the optics can be damaging for the program:

> [Participant] tells me they found out all of the programs resident positions were filled, which is always a relief because "the optics if all spots are not filled is not good." I ask her if that has happened in the past, which she answered a number of years ago. *Observation Participant C (Fieldnote)*

The challenges and level of involvement with the interview process can be demanding. So much was contingent on the outcome that participants became involved in all aspects of the process. One participants' experience highlighted their level of involvement as the result not having a program coordinator (i.e., support team) and having to assume additional tasks:

> It went well because I was very motivated to not make mistakes of the past in terms of organization and so on, so I was very involved to level I don't ever want to be involved in this again. You know I read every single email that went out and double checking every single calendar and all these things. I think I needed to do it because we didn't have a program coordinator, there was no choice… Keeping the physician schedules and for interviews is a very big challenge. So, just, a lot of things going on. I think it went well, logistically, we ended up matching, which was good. *Interview Participant H*

Paradoxically, with exceedingly high expectations and amount of cognitive energy expended on the interview, the extent to which an interview was used to select the best fit between resident and program was debatable, as stated: "I feel like we probably put too much weight in the interview process for selecting really good candidates." *(Interview Participant G)* Furthermore, a participant stated the inexactness of the process:

> Yeah, but again as I said, I don't think I've ever done a great job of it, I think we all have our own opinions on the best way to go about. If any of us were being honest with you, none of us have cracked the golden egg so to speak and know how to perfectly to do it and so none of them have started yet, so we'll see. I mean, it is interesting talking to the program directors and for us, we didn't go nearly as far down our match list as we usually do, and I'm really, I don't know why. We still interviewed residents from all over the country still got a good diverse group of residents. *Interview Participant E*

As already discussed, there were concerns and hesitancy of how the virtual platform would project their program; however, positive aspects were also noted. One participant who self-described as an introvert, found the virtual format not as mentally draining:

> I think they're different for different reasons I've actually been pleasantly surprised at the virtual platform. I actually almost favor it being an introvert. The in-person interviews really take it out of me like it's a whole day of like talking and small talk and so with virtual it's, it's very controlled like we shut the Zoom room down and it's a finite period of time, and you have time in between. So, I actually, I like it from that level. *Interview Participant B*

The period during COVID-19 was fluid and dynamic, affecting travel, virtual meetings, and the evolving landscape of the United States Medical Licensing Examinations (USMLE) making the best approach to conduct this process a moving target. To this end, a participant described challenges they foresee on the horizon:

> Look, I mean there's some big changes gonna happen there's this conversation about signaling. An applicant has, you know, 12 stars and if they really want to go someplace, you get two stars and you get to select they are able to declare their top five places right off the bat. And there might be a preliminary match like, everybody right, interviews at whatever their top five are and you get your first pick and then there's another round. I know there's a several models sort of in the works, and I can foresee that this would be considering what I don't want to happen is to have two full, things like, a screening, an individual screening and then a whole other interview day. So, I think that will be a disaster if that's the case, so right twice worse. *Interview Participant A*

The resident selection process was fluid not only due to the ongoing COVID-19 pandemic, but also because of changing ACGME guidelines and AAMC testing requirements, and an evolving medical student interest in a given specialty which added to the complexity of the role as administrator in the task of recruitment and interviewing of potential residents. In combination with recruitment, the ambiguity of selecting those to interview, logistics of the interview, cognitive energy for interview process, makes for a time and energy consuming endeavor the PD must engage with to successfully administer a residency program.

### *Resident Morale and Behavioral Matters*

A direct outcome of resident selection was as a participant labeled "behavioral issues," which may arise from misalignment of expectations, incongruence between resident personality, participants, and fellow residents, or willingness to apply effort, diligence, and professionalism as a resident. This often manifests in the annual survey residents completed in regard to their experience in a residency program. Most participants described these various "behavioral issues" or the survey outcomes as a negative aspect of their position. Thus, establishing a process for resident selection was crucial to hopefully mitigate "behavioral issues" and result in a mutually beneficial partnership. This process resulted in what one participant experienced as the most mentally fatiguing aspect of being a PD:

> So that is an easy one, because I had a resident with significant behavioral issues, and went through a year and a half of trying to coach him, change behavior and ultimately tried to separate him. And that was exhausting, not to be there for the associate program directors and the chairman, was just, we gave him every chance to get it turned around and then when we tried to show him the door the whole legal process, I mean it took about a year. So that was awesome. *Interview Participant E*

Another participant described not only equating this portion to HR director, but the toll tasks of this nature took in terms of consumption of time and emotional demands: “Um, I mean I think most HR components disciplinary action. I think that's sort of biggest drain, timewise and emotionally.” This same participant further described how a breakdown in the resident selection process initiated the acceptance of this resident with behavioral issues, resulting in direct changes being made:

> The vast majority of residents are great residents, want to be trained, we enjoy training. So, the vast majority of time it works out. In this one particular case, it actually the fact we picked up on it, he would have been probably outside of our match range, but the residents just went to bat for him. That was the one year I tried putting a resident on our admissions committee just to try and get them more buy in and, frankly, as a direct result of this, we no longer have a resident. *Interview Participant E*

Participants described their experience with not only managing the formal administration and curriculum in training residents but also in being there for resident’s emotional well-being and managing “informal” curriculum as experienced by the following observation:

> Sitting down after the last patient [participant] "now I have to call one of my advisees, he is supposed to be on leave for mental health and he shows up at the place where he is on rotation... I have been getting emails and text about this all day... he said he was in a fender-bender on way to clinic... then changed it to sideswipe... I don’t think it actually happened... so now that’s what I have to deal with...he I supposed to be on leave starting Saturday, I need to talk to him about what being on leave means, he is the one that requested it..." *Observation Participant C (Fieldnote)*

Furthermore, a resident who was a mentee of one of the participants was having challenges finding meaning and motivation to continue as a physician:

> She tells me that he, the resident, is despondent and doesn’t feel anything, not motivated and from her description not engaged with the work. She says this is not the first time, and that she needs to follow up on this. Part of the problem she thinks is that his continuity is not good, and his schedule keeps getting filled with people he has never seen. [participant] told him to sit down this summer and get people scheduled that he wants to see, build continuity. This resident wants to go into primary care so

> [participant] doesn’t want him to lose confidence and the joy so early on. I ask [participant] if he is one of her mentees and he is, she says they used to always ask to have mentees in their clinic more for convenience than anything else, but now she wonders if there needs to be separation of who works with them in the clinic and who is their mentor *Observation Participant C (Fieldnote)*

However, while coaching and mentoring residents can be viewed as rewarding, it again becomes a source of frustration if those efforts are not successful:

> Yes, in general, that's the main thing. Yeah, sucks the life out of you. It's not just the one resident who, we have that other regular I will say that's also one of the rewards. Isn't that a couple of residents were starting down that path, but through coaching and other threats frankly you were able to correct that behavior and then turn into great residents that's rewarding part of that you can turn somebody around. But yeah, it is time consuming and frustrating, and it doesn't always work and if it doesn't work, that's when I'm really frustrated. *Interview Participant E*

The extent to which resident behavioral issues were a detriment to the position of PD, one participant would state they would not have assumed the position of PD if they had known the extent of behavioral issues. Further, some participants perceived their newer residents to have little experience with a traditional “work” role prior to residency, often going from a 4-year university or college into medical school and onto residency. Thus, they perceived it to fall upon the PD and APD to not only train residents to be a competent physician, but also on how to function as an employee, or professional:

> Me being raised by traditional parents trained in a traditional type of residency program. And now with, with these newer residents and medical students and they lack knowledge in certain areas that I always thought was just sort of routine every doctor should know. And then, some of them have never been in the workforce. And so along with teaching them how to be physicians to teach them how to be an employee. *Interview Participant F*

The COVID-19 pandemic has manifested in many forms throughout society and many participants described the impact on medical resident training, and how the

unknowns of the evolving pandemic affected not only their training but also the resident's mental and physical health. A participant discusses how the residents in their program struggled through portions of the pandemic and how this personally affected them:

> So, not so much with the negative like they're dragging me down but with the pandemic, especially I think in May, when our residents were just tired, and they were being called to do more and more and more especially on the inpatient and the critical care services. That was hard to see because my residents my mentees were talking to me and telling me how stressed out, how burned out, how scared, both for their, their physical well-being, their mental well-being, their family's physical and mental well-being. That was really hard, and I've heard that again and again I've never experienced it anything like this right, but it was like you know burnout stress on steroids because there were so many, and I don't want to say high functioning because I think you can be very high functioning and still get burnout. *Interview Participant C*

While addressing resident "wellness" was an initiative supported by the ACGME, determining how to properly address it was a challenge. One participant described how misalignment between the wellness experiences of residents and the PD or APD caused strain:

> So, I think that's one thing. I'm probably in the same vein of the survey we're part of called the second trial so in [specialty] we did the first trial which was a duty hours trial to look at a comparison of two sets of duty hour rules the 2011 rules to the 2003 rules. And so now we have the second trial which is looking at resident wellness. And we got our data for that, and it wasn't where at all that my perception of the program is and so that is also an area that your kind of, you just get tired. Whenever you see things that you're not expecting and, and don't know if you can solve. *Interview Participant A*

To conclude, participants experienced *resident morale and behavioral matters* from at least two vantage points. Through one experience these matters are rewarding as coaching and mentoring residents to inform and change their trajectory from one of failing, not thriving, and being generally unsuccessful to one of competence, confidence,

and autonomy. However, those same behavioral matters are often a source of strain, exhaustion, and little fulfillment in the role as administrator of a participants.

### *Accreditation*

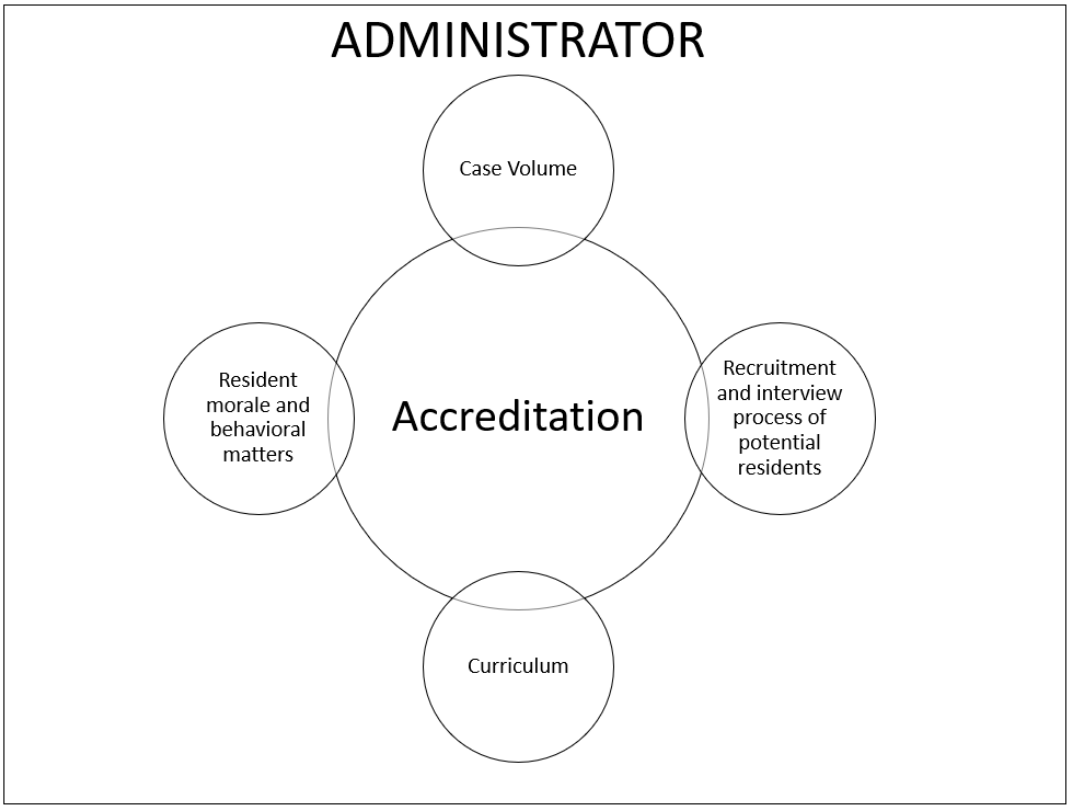
*Accreditation* was an all-encompassing task, subsuming all other subthemes constituting the overarching role as administrator (Figure 4.3). In other words, decisions regarding the residency program were based on how they fit into the interpretation of accreditation standards, because if a program does not become accredited or is unable to sustain accreditation, there ceases to be a residency program. A component of the accreditation process is an annual program evaluation (APE) and an annual resident survey. These survey results were discussed by a participant during a PEC meeting (another ACGME requirement) to promote transparency and to improve the program. However, it can be viewed as burdensome to explain to the ACGME why certain survey items may or may not compare to national averages, as described by one participant:

> So, the APE is what we submit annually to our local GME [graduate medical education] about our program. The purpose of the APE is to prepare and to kind constantly improve and look at our program, as well as to prepare us for our self-study that happens every 10 years from the ACGME and to prepare us for our site visit… So, they [ACGME] doesn't understand our specialty, they don't understand our requirements that it's a three-year rolling average. And that, 90% is good. Like, there's a lot of explanation that has to be done, which is a little burdensome. So that's something that we're continuing to work on is making sure that they understand. *Observation Participant B (PEC meeting, direct quote)*

The surveys and subsequent follow-up documentation are not only experienced as burdensome but were also described as demoralizing as they were perceived to be viewed as a condemnation of all the cognitive, affective, and physical energy applied towards the program. A participant described their experience when survey outcomes directly result in being cited by the ACGME:

**Figure 4.3.**

Title. Relationship of the subtheme of accreditation with supporting themes, and role as administrator




> So, we get our annual surveys we have all this data that comes at us. So, whether it's ACGME survey. Then you get your ACGME letter of accreditation or not, And I think those things can be incredibly demoralizing whenever you see how residents answer and anonymous ways to those bodies and so we were cited a couple of years in a row for duty hour violations. *Interview Participant A*

Being cited for what the ACGME sees as a deficiency was experienced by one participant as a sense of hopelessness and a source of burnout:

> And this year we got a citation for residents not being satisfied with feedback… And so, I don't even know how to make you happy. And I think those things contribute, very significantly to program director burnout, whenever you feel like you're doing everything. I'm doing everything as an individual, I can possibly do to create the environment, of an optimal learning environment that fosters education that fosters teamwork, like all these things and then to be nitpicked by the ACGME

> over things that quite frankly, I can encourage but I can't stand over someone and make them write an evaluation. *Interview Participant A*

According to the ACGME, the resident/fellow and faculty surveys "are used to monitor graduate medical clinical education and provide early warning of potential non-compliance with ACGME accreditation requirements" (ACGME, n.d.). Individual survey questions are not available for the general public; however, questions are stated to focus on general content areas such as: "Clinical Experience and Education, Faculty Supervision and Teaching, Evaluation, Educational Content, Resources, Patient Safety and Teamwork, Professionalism, and Diversity and Inclusion" (ACGME, n.d.). Thus, how the residents responded to the questions as the participant above stated cannot control how faculty responded or not to submitting an evaluation (i.e., feedback). Further, from the perspective of the participants, they only have so many resources at their disposal to meet new requirements set forth by the ACGME, as stated:

> There's always a good reason that it [new program requirement], there's just not capacity in the list of unfunded mandates so some require time, and some require money, and some require additional personnel, and without any of those things like without even one of them, they're really hard to accomplish. *Interview Participant A*

This constancy of being asked to do more and more with no additional funds, personnel, or support was experienced as exhaustion as the same participant stated:

> And this is one of the places like I said from ACGME perspective, the ACGME is the one that's always asked me to do more. And that gets exhausting when you don't have any resources. *Interview Participant A*

This was described as a paradoxical interplay between participants and the ACGME as they require more and more, with no additional resources to meet the ask. Further, the ACGME (2020) in the document *The Program Directors' Guide to the Common Program Requirements (Residency)* has a guideline that recommends a PD to stay in their

role for five or six years; however, this is not the current situation as described by participants. This interplay is described by the following participant:

> I think, it's interesting because ACGME now is focusing a lot on faculty wellness in addition to resident wellness and, they're harping on the fact that program directors are not staying in their job long enough and that's part of your accreditation is you have to be a program for five years or six years. Because there's also some data show Program Director, time is broken record is linked to outcomes. And they don't really do anything to help you. *Interview Participant A*

Another participant described their experience with fellow PDs not staying in the role for the same length of time as prior persons:

> But I look about, so [name], who was the program director of now became program director the same year I did in 1987. And he stepped down two years after I got there. So, he stepped down in 2002. So, he had been the program director for 15 years. [name] took over for him, was the program director for five years and went on to become the executive dean at the University of [state]. [name] the program director after him stayed for 4 years and went on to become the VP at the American Board of Internal Medicine. [name], the program director after him stayed three years and became the chair of medicine at [clinic]. You know, two points determine a line, but that certainly sounds like a trend. *Interview Participant D*

With much of a PDs time and energy spent on retaining accreditation, one participant stated it has transformed the role of a PD:

> The other time sink on the topic is sort of being compliant. I think it takes a little while to be in the job to realize all the things you need to do to become compliant or stay compliant. That also has taken a lot more time than I could ever imagine. I thought this is education innovation job, super cool, super fun. And it's this HR slash compliance auditor time sink. *Interview Participant H*

A requirement for procedural based residency programs are the minimum cases (i.e., patient encounters) a resident must complete as described on the ACGME Case Log Minimum Numbers document which states this minimum "represent[s] what the Review Committee believes to be an acceptable minimal experience." For example, in

Otolaryngology a resident must complete a minimum of 22 thyroidectomies (Crosby et al. 2020). All specialties have minimum case requirements based on procedures those residents should complete at the conclusion of their training. With accreditation at the crux of much of what the role as administrator assumes, during the time of COVID-19 issues with resident case volumes arose as an increasing complication of training. The interaction of role of administrator handling the accreditation standard of case volumes in the setting of COVID-19 is subsequently explored.

***Resident Case Volume***

An accreditation requirement for programs was to ensure residents meet minimum patient encounters, which will vary by specialty and if those are in an outpatient setting or surgical "case". Needless to say, meeting these case minimums in the current setting of the COVID-19 pandemic restriction and reallocation of resources has largely removed what control participants had through scheduling and other means over meeting the minimum case requirements. Further, with the rapid, often unforeseen changes in how the COVID-19 pandemic evolved and changed over time, it ultimately affected the number of patients the residents could see. This was directly attributed to the cancellation of elective procedures, residents being reallocated to different departments, and indirectly by a shortage of nursing and other healthcare team members (Crosby et al., 2020). A participant described the experience with the lack of control as a challenge but with little control on the outcome:

> I mean COVID has ruined everything. So, the end of the year is when we had that moment to regroup and kind of try to get better for next year and then we have COVID to deal with. So, being [specialty] our residents have surgical minimums need to hit when you don't operate for three months, so that as proved really challenging to meet their educational needs within a world that we have no control over. *Interview Participant B*

The complexity of an interconnected healthcare system with many contributing members, stressed by the COVID-19 pandemic, was summarized by the following participant and the worry it induced:

> The fact that we've had a nursing shortage has really substantially impacted the operating rooms so our primary sites are down 30 to 40% of the standard, the usual nurses so since July mid-July we've had to cancel a lot of cases, with some frequency, and now we're not doing any elective cases for at least a couple of weeks, because the hospitals full so between nursing shortage, in January, we had a higher number of COVID in-patients, but we had a surge of nurses like they had a bunch of outside, nurses, travelers that were supplementing. And so, the hospital capacity was increased. And we can handle it because we had all these nurses and then, travel nurses started being paid more, and so people left. And so, we were not able to up, so everybody's nervous about case numbers and things like that and, really for good reason, I think I'm a little worried about our junior residents having their propriate operative experiences and some things like that you know I think we're gonna be feeling the impact of this for a couple of years, to be honest when it comes to case volume exposure. *Interview Participant A*

As the pandemic evolved, rises, and falls in the numbers of hospitalized COVID-19 patients directly impacted the health care system. In another aspect, the lost time and effects from the first "waves" of the pandemic are anticipated as the participant stated "for a couple of years".

Another task or responsibility which fell under the role as *administrator* was the overseer of the program curriculum, entailing creation, implementation, content development, and execution. Thus, the participants described how the curriculum has been and will continue to be affected as the COVID-19 pandemic evolves, and foreseeing the "new normal" as only conjecture.

### *Curriculum*

A formal *curriculum* is multifaceted, complex, and interconnected with many stake holders, but ultimately the responsibility for content design, organization, and recruitment of speakers for didactic sessions fell to the PDs and APDs. Participants described how they balanced what was required (ACGME) and delivering meaningful and engaging content. One participant described how frustration arose during a skills lab:

> After [participant] and I chat for a bit, she is busily trying to get the additional educational materials set-up so residents can work on laparoscopic procedures, but there is not an insufflator or other instruments available for them to start. [participant] is moving about trying to get the residents to rotate through various stations all the while checking her phone for messages, emails, and phone calls to try to get the other equipment ready so the residents can start working. She is also moving about trying to find supplies, scalpels, surgical instruments, looking through cabinets and drawers "it is so frustrating not knowing where things are and trying to get all of this coordinated..." *Observation Participant B (Fieldnote)*

Along with the time and energy expended to organize, coordinate, and teach during sessions, the time frame for planning was often 18-24 months in advance, thus not conducive to the rapidity of changes due to COVID-19 or even fluctuations in faculty and staff:

> [Participant] pulls me aside and asks if I want some context as to why this session, that was originally planned to be at the other simulation center, got moved to this site. [participant] tells me that the director of the other site left, and the assistant put their notice in immediately following this as well. So, this left them no place to conduct this training, not to mention other faculty are away on maternity leave, leaving a void [participant] now must concern herself with the coordination of this training session. *Observation Participant B (Fieldnote)*

A separate participant described their experience as it deals with the fluidity and rapidity of the response to COVID-19 and how those timelines were not congruent with scheduling skills labs months in advance:

> I think we're still struggling a bit educationally because we're meeting by zoom and, I don't think we know the efficacy of zoom based education time, as opposed to face to face, and we've had to curtail, a lot of our skills curriculum. And because we use [educational materials] and so COVID and those environments still a question mark and so I think we're kind of in the space that we're getting back to where we need to be but on the other hand, we're not all the way there yet. So, we're getting there. The recovery has been a little more challenging than I'd hoped. It was impossible things that we plan six months in advance, and it requires that much advance planning, and then you just have to shut it down and there's no way to do things on the fly. *Interview Participant A*

The following was from an observation where the discussion surrounded a participant and them scheduling formal didactics. For context, this conversation was prompted by a resident curious as to when didactics would resume, and how the participant stated being overwhelmed, as well as stating it was like “herding cats” to get others to deliver a session:

> [Participant] and I spoke about these sessions [formal didactics] that are designed for a more formal way to provide teaching or educational moments for the residents. [participant] runs this program, to which she recruits fellow physicians to give talks or present cases in a discipline they themselves are interested. It runs on a 24-month calendar, and [participant] herself keeps track of it on an Excel spreadsheet. Multiple sites participate in these activities; thus, it reaches about 50% of the residents. As I touched on earlier, these sessions stopped for a moment in the fall as things became overwhelming, with COVID, resident interviews and [participant] having COVID. *Observation Participant C (Fieldnote)*

In addition, how each program approached, emphasized, and regarded formal didactic sessions may have a direct impact on how residents performed on their boards, thus a direct reflection of the program’s effectiveness and accreditation status. One participant described how the expectations set by the PD and APDs impacted how residents prioritize the sessions:

> There was really no emphasis on didactics and holding residents accountable for their own independent learning. We routinely had residents failing their boards. That's not only very visible, but frankly put a

> program in jeopardy and we were approaching probation. That was one of the first things I did is we did a 180 on and made it clear to the residents that we did expect them to perform well on their annual entrance exams, they would be held accountable if they didn't. Frankly as imagined that created some friction, early on, just partying every night, I haven't studied. *Interview Participant E*

Participants also described the challenge of predicting the educational landscape, not only in the backdrop of COVID-19, but in addition to the rapid increase in technology use within healthcare from robotics, artificial intelligence, genomics, and other molecular technologies. The challenge was described as gauging how much or what to include with medical technology and knowledge expanding exponentially. A participant described the challenge experienced juggling the new and potential new curricular topics to be covered:

> Between some things like Patient Safety and Quality. I think that's a really hard area to expand on. I think residents are doing it every day. But incorporating all the technology in a way that's easy to implement or easy to think about in the moment or any of those things I think is a challenge. Where the rest of technology and medicine goes will be a challenge, whether it's AI, or expansion of robotic surgery or what you know I think so, trying to figure out foundations of what we're supposed to teach versus new things, versus making sure everyone stays well versus, you'd have a well-being curriculum, but no one likes it. *Interview Participant A*

Participants described their experience navigating the educational landscape in providing the needed foundational content with an eye to the future, especially given the challenges of the COVID-19 pandemic, all the while managing program requirements for accreditation, resident's satisfaction, and maintaining engaged faculty consumed their administrator role. However, there was another aspect to the curriculum and role of PDs and APDs that they are educators.

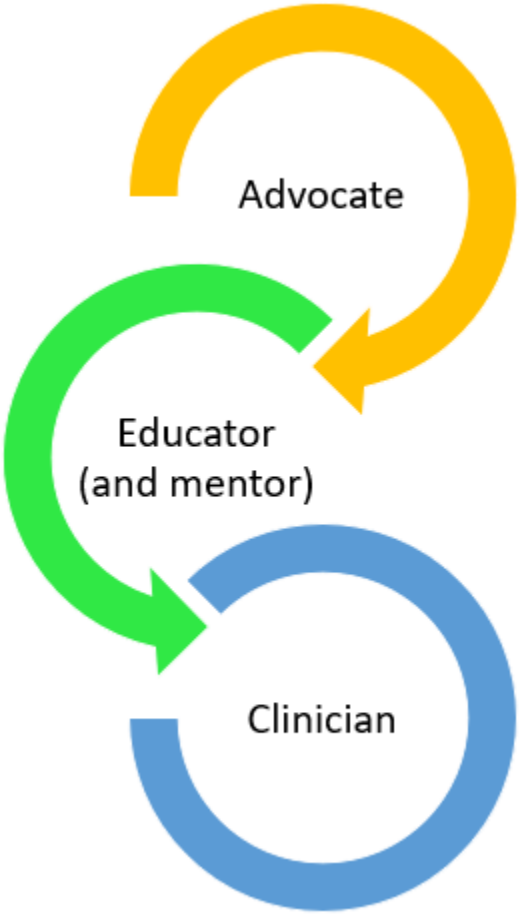
**Educator**

The role as an *educator* described how participants strike a balance between providing and creating a safe, inclusive, and non-threatening learning environment with

all the appropriate resources and opportunities, all the while expanding, challenging, and pushing residents to become the best autonomous physician. This role was a dynamic process, where the role as advocate, educator (and mentor), and clinician all interrelated and inform the other. As such the educator role was not siloed or compartmentalized, but was present in many aspects and experiences, even the role as a clinician (Figure 4.4).

**Figure 4.4.**

Title. Interrelationship of role as educator.



A participant discussed the challenge of striking this balance with how residents are still “vulnerable” in one sense but at the same time still a licensed provider with responsibilities (albeit with oversight):

> Yeah, and that's the thing like they are vulnerable, we have to treat them like, trainees, but they could still get sued, they can still, they're building a reputation in residency that may follow them and so you have to realize that. So, it only gets harder once you're out they think they are overwhelmed with responsibilities and stress they've no idea. *Interview Participant B*

Not only were participants responsible for the oversight and direction of the curriculum writ large, but they often were also in direct contact with the residents educating in the clinical setting with direct patient encounters. A recurring philosophy was the idea of applying the basic science along with a nascent clinical knowledge, in building frameworks to practice medicine, or the “art” of medicine. The following was from an observation demonstrating how one participant, utilizing motivational interviewing, guided and mentored a resident in having a challenging conversation with a patient:

> [Participant] states it’s a long conversation and a tough conversation, again illustrating the art of medicine, how to bridge the gap from what the physician wants to have the patient understand and work towards and how to explain this to a patient, so they buy in to the idea. [participant] to the resident "When you have a BMI like that what does the literature say is the most efficacious?" The resident replied, bariatric surgery, which [participant] agrees with, but as the resident points out the patient will need to be enrolled in a program for some months in order to have the surgery. [participant] goes on to explain that most bariatric centers have a medical bariatrics, which helps the patient manage weight prior to and after the surgery. Also, in how to approach the topic to the patient, come from a medical literature point of view. [participant] explains is to approach it from the standpoint that it is such a "travesty" that people want help but not sure the medical community is able to communicate that they are there to help. *Observation Participant C (Fieldnote)*

Expanding on the role as educator, participants viewed being a mentor as intertwined with being an educator. As such, a participant described their overarching educational mission as removing barriers to allow residents "to accomplish what they want" and trying to create a path residents success. However, this can be a source of frustration. One participant described how one can create the path but then having the resident adhere to the path is often challenging:

> Now I think there's plenty of ways to do that I think the hardest thing is to it's sort of leading a horse to water but you can't make them drink so trying to figure out how to convey that message to the residents in particular, like what they need to, have how I can make the path that how they need to also participate in the path in order to, to accomplish what they want. So, I think that's probably the biggest challenge and maybe the biggest frustration is, when you're a parent and you say, don't do this or else you say 27 times and they do it and so, from a resident standpoint, sometimes, helping people figure out what they want to do with their future and then be creating the path to get there and sometimes. The second part is harder to do. It's not always, clear. So not everybody believes me. *Interview Participant A*

A mentor role can be viewed in the clinical context when working with residents with their patient encounters, thus allowing the resident to construct meaning to of their own "art" of medicine:

> [Participant] goes on to say, "What I am hearing is a negotiating process, the patient is knowledgeable and has readiness, and you got that from open ended questions." She goes on to say that there's a lot that can be read about body language, and that she has gotten into the habit of saying "may I exam you?" [participant] goes onto discuss how this changes the power dynamic and takes some of the power away from her and puts the patient and physician on the same plane. [participant] also discusses with the resident how it is always good to review and reflect upon the line of questioning that you used to get the answers that you are needing *Observation Participant C (Fieldnote)*

Furthermore, as mentioned earlier with resident morale and behavioral matters, often the transitions from being a student to an employee was challenging for residents.

Thus, one participant described how it can be challenging to model this part of their professional identity in their mentorship role:

> We don't have a specific curriculum on professional identity, but I do think it's very important that we kind of have some of those themes that we talked about some of our mentoring sessions. We have mentoring sessions formal ones three to four times and then you're expected to meet with your mentoring family outside to some of that is, you know certainly role modeled but also discussed explicitly, but I think it's really hard. Some of these are it's just it's their first job so they don't really understand they're not a student anymore they are an employee, they're a physician and even though they feel like the lowest person on the totem pole, they still have like MD or DO behind her name which carries a lot of responsibility. So, it's really hard so if you know how to do that *Interview Participant B*

As a mentor and educator, appreciating when to provide advice or allow the resident to learn through their own experience was a challenge with the added complexity of needing to advocate for the residents to ensure they have a safe and inclusive learning environment.

**Advocate**

Being an *advocate* for residents expanded upon the idea alluded to in prior a section that residents were still in a vulnerable position as they transition from a trainee to an autonomous physician. Participants experienced a sense of wanting to create a safe, inclusive, and non-threatening learning environment, but were fully aware residents were not always under their direct supervision. A participant discussed advocacy in the context of the learner mistreatment process, as residents begin to interact with nursing staff and others of the healthcare system:

> We obviously have control over keeping our learners safe within our umbrella, but we can't always control what patients say to residents or what nurses say to residents and so we have a learner mistreatment process to make sure that all residents feel safe and supported. *Observation Participant B (direct quote)*

Creating a safe and supportive environment required an open dialogue between staff in addition to providing training for the residents to assist in building a toolbox for how to handle challenging conversations. An observation during a PEC Meeting highlighted how residents' perception of the hierarchical dynamic may place them at a disadvantage when interacting with nursing and healthcare staff, thus placing the participant as a liaison between residents, faculty, and the healthcare team:

> Another resident discusses how there is a disconnect between what the nurses perceive that the residents do and their intentions. There is some opinion that nursing needs some education or re-education on what the role of the resident is and that they do care for the patient. It is perceived by this resident that nurses think residents do not care what the patients are experiencing [during the medical procedure] because they are not in the room for the entire process.
>
> The faculty, even though not present much in the [procedure] areas, recognize that certain areas are off limits to other staff who are not physicians, and this can create barriers and add to the power imbalance. This faculty is advocating to teach the residents how to have difficult conversations with nursing and other staff. They state that it is a disservice to the residents not giving them the necessary resources in order to have these challenging conversations. She thinks it would be beneficial for the residents to have this added to their curriculum to better prepare them. The PD [participant] states they will investigate what resources are available and think it's a great idea to better prepare the residents for this learned social skill of interacting with other staff in a hierarchical dynamic. *Observation Participant B (Fieldnote)*

At times it may not manifest as verbal or other blatant learner mistreatment, but nonetheless one participant described how it fell upon them to stand up for the residents if they were being asked to do tasks outside of their scope in terms of an educational experience:

> I find that some of the facilities in particular rely so heavily on residents to do jobs that are done by other people and other hospitals that's just ridiculous, again that's not part of their job, it is not helping them get to where they need to go I think one of my roles is to stand up for them and

> say, no, this is not in the scope of a resident, the resident does not need to do what the pharmacy tech does at [name of institution], for example, that is not part of their education. *Interview Participant A*

This feeling of wanting to create a learning environment for residents which was safe and supportive was described as being particularly challenging during the COVID-19 pandemic. As one participant described their experience of being tired and exhausted, as well as not being able "protect" residents in a similar fashion has been a significant hurdle to attempt to overcome:

> I wish that I could protect my residents more from scary and exhausting aspects of pandemic and I guess I've for all this time in my career I felt like, yeah, I can do that I can, protect them. I can make sure that, they're not being overworked and not being stressed out and feel a sense of hope and a sense of purpose, and I think that's been one of the toughest aspects. Oh gosh, oh, I am doing everything I can, I don't think I can protect you, to the same degree as I once felt like I could because the pandemic just, was stressful on everybody…This patient is suffering, mentally and spiritually. And it's great that you listen to them, but hey, we have a partner to hand off to who's got expertise, we don't have that. I mean there's like two months or three months wait for that on, and so that's an everyday, sort of, three, four patients a day thing for the residents to deal with. So that's in one clinic on, you know one rotation in one hospital. I can't protect them from that I sure as hell can't protect them from the stress and strain of their ER rotations and patients being, scared, and I mean there's just been so many parts of this pandemic that have been stressful. And I can't protect them. I can't protect them from all this. And, you know, begs the question like What am I supposed to do but I do feel a sense of responsibility. I mean yeah, they're physicians but they're young physicians and I, I really worry about them starting their careers with a sense of burnout. You know, and like I'm so stressed, I can't extract and even if I could my system can't, I can't even imagine what people like in Washington in New York. I can't even imagine my limit. In [state], and it hasn't been that bad. So, somebody's always got it worse than you, but this is really stressed my ability, to advocate and protect my residents, I think that's been one of the worst aspects, And, just knowing that like, I'm done. I can't, do anymore, you know. Yeah, so I think that's it. *Interview Participant C*

Closely integrated with being an educator was the role of *clinician* where at times they may be educating patients, and at other moments educating residents as they acquire the

skills of a practicing autonomous physician. Needless to say, the role of educator was manifested in many areas of the participants' career experience.

### Clinician

The role as a *clinician* was the anchor role, as a reason why participants went into medicine was to provide compassionate care for patients, and thus to assume other roles one must first be a clinician. Identifying as a clinician, participants recognized the inherent ups and downs, challenges, and potential for poor patient outcomes and how this formed a sense of resilience when faced with these weekly clinical challenges. A participant stated resiliency as a recognized part of training for their specialty and stated that poor outcomes have a larger negative impact than good outcomes have a positive impact:

> That's part of training quite frankly I think we, in [specialty] are accustomed to for lack of a better word, ups and downs and that's part of the resilience that you have to build, and we have to recognize that for every bad thing there are 10 good things [specialty] are not like that you see the bad thing in front of you way more than you see the good things. And it's just again it's part of the training and part of the expectation of the job to be honest, right. So, can I give you a specific technique, no, I can tell you that it's just, it's part of life. *Interview Participant A*

Another participant described their feelings of poor patient outcomes, and this feeling manifested in different forms depending on the perceived amount of control, if medical error occurred, or if there is a perceived incongruence of experiences between stakeholders:

> I think I got a decent perspective that if like I literally had no control over it, I can let those things go. If it was a medical error which sometimes happens, those are the ones that weigh on me. And then, or if it's a different perception the patient or the resident had a totally different perception than I had. That's tough because I can't reconcile that. I'm someone that a plus b equals C and when I, when I don't have that, that brings me stress. *Interview Participant B*

Not only did medical errors weigh on the participants in the moment, but if those errors result in medical litigation, this created a re-opening of these feelings for years after as it works through the legal system. Litigation was experienced as a second victim as a participant stated:

> I mean, no one wants a bad outcome. So, then you're reminded of litigation, and then the litigation itself takes years. So, already processed the bad outcome, which is usually like two years ago, and they reintroduced rip off the band aid, with a lawsuit, and you're dealing with it for another two to three years with constant back and forth communication and reliving *Interview Participant B*

As a direct result this participant described how they may consciously or subconsciously avoid similar procedures which resulted in the litigation, thus in one way diminishing their self-efficacy in the procedural task:

> Also, I don't know if it came up in our prior conversation, I had like one lawsuit that like shook me from [procedure]. So, I've probably backed off a little bit from that just, probably just, happened naturally from my kind of own fear and anxiety. *Interview Participant B*

Clinical work, as with other aspects of being a PD or APD, was multifaceted, interconnected, and complex, but a participant recognized when feeling worn out it was a direct result of their role as a clinician:

> Yeah, I think it's interesting I bashed on my clinical work, and it's not, I get a lot of satisfaction from my clinical work, but I would say of the area of my work that wears me out more. It's definitely the clinical aspect. And within clinical it's a big umbrella. But I would say that in my time here at [location]. I'd say at least, I don't know, maybe 85-90% of my burnout situations and there have been many, probably, you know once every 18 months. This year, more than one. *Interview Participant C*

This dichotomy of experiencing a feeling of both satisfaction and a sense of burnout, from the same situational context was best demonstrated from different experiences of a participant in their own clinical context. This first experience was from an observation

during a participant's clinical responsibilities in an outpatient setting, where the patient was well known to the participant and has been seen by them for years. The patient's grandson had died by suicide and prior to entering the patient room the participant warned the researcher they may decide to enact the below scenario and ultimately does:

> The patient goes on to show pictures of them and their grandson on their phone, then starts to tell the story of how when a local college decided to close out of the blue, the grandson lost their job and school, his girlfriend left him. The grandson then went to a local park with his grandfather's gun shoots himself in the middle of the forehead. The patient in the room proceeds to show us [researcher and participant] the picture on her phone that she took of her grandson lying in the hospital bed, with a tracheostomy, and a bullet wound in the middle of his forehead. *Observation Participant C (Fieldnote)*

Leaving the room, the participant conveyed this to the researcher with the researcher's immediate reflection in brackets:

> [Participant] says, "I think that is the fourth time I have seen that picture of him lying in the hospital bed, I am not sure how many more times I can see that… I lost a friend [a physician] to a self-inflicted gunshot… while she was talking [referring to patient] I was sending messages to her social worker about how she is revisiting the same stories…." [this is not a "typical" experience for anyone to have, no one expects to see a picture of someone who has a self-inflicted gunshot wound, not to mention once, but this has occurred multiple times, and every time reminds [participant] of her friend that died of suicide of the same manner.] After, [participant] says "I am mentally exhausted…" now she needs to regroup and get onto another patient phone visit as if nothing happened. *Observation Participant C (Fieldnote)*

Immediately following the above experience, the participant had a phone visit with a patient who recently lost their partner, with the participant's tone, pace, and empathy towards the patient fully present in the moment:

> Towards the end of the conversation, the patient must have said something in the sense that he appreciates all the [participant] does for him as a patient and she responds "thank you, you mean a lot to me too… are you still working in your woodshed?... Keep doing things I know you are missing [name of spouse]." *Observation Participant C (Fieldnote)*

These two patient encounters occurred within a 30-minute timeframe on a typical afternoon and demonstrated how role as a clinician may at times giveth mental energy and taketh away feeling at times mentally exhausted.

Another area experienced as being a contributing factor to burnout was navigating how the participant feels was a just and correct way to manage patient care versus what insurance ultimately dictates how the patient care is managed:

> I fortunately haven't seen that as much as insurance coverages improved, I think honestly that's what contributes to burnout is not being able to practice medicine, the way that you want to practice, the way that you're taught to practice, and the way that is just for the patient. But I think I mean honestly that is probably the one of the biggest contributors to burnout. *Interview Participant B*

Navigating health insurance as constructed in the United States healthcare system was demonstrated from an observation of a participant as they work with getting what the patient needs to what insurance will cover:

> The patient has a CPAP machine, but the machine is old, and the resident is trying to get her a new one but in order to have insurance pay for it they will have to go for another sleep study, which is done at another facility. Next, they discuss getting the patient on an inhaler, but there is question as to whether insurance will cover it or not. *Observation Participant C (Fieldnote)*

Another aspect of the complex and dynamic insurance/reimbursement situation was the amount and tedious nature of the task of documentation of a patient encounter. The documentation task was completed via the electronic medical (or health) record (EMR), where all history, physical, laboratory, radiology, and other patient health information was entered and stored. Not only was this used for purposes of insurance, but the EMR documents certain indicators for the larger health care organization that employing the participants as physicians. Thus, how adequately and timely the physician

enters information into the EMR dictates the reimbursement the organization may claim. The following experiences were observed in the clinical setting with one of the participants to illustrate how they view these competing interests:

> [Participant] states: "CMS quality indicator, this is important for you [speaking to resident] to know what indicators your healthcare organization will look at..." She goes on to say is it necessary to check microalbumins on patients with stage 4 RF, when they are already seen by nephrology? Probably not, doesn't make sense in her words but is nonetheless often done.
>
> [Participant] and the resident discuss the need to check lipids in those with diabetes, which there is some controversy. LDL is warranted, and this gets at what evidence-based medicine states is best practice and what the larger healthcare system says is best. [participant] says they will order LDL on diabetic patients "to help out the organization, but is there valid science behind it? I don't know."
>
> [Participant] goes onto explain that insurance companies are notorious for changing what inhalers they will cover, and sometimes change it every 3 or 4 months and not even let anyone know. *Observation Participant C (Fieldnote)*

A couple of participants described how at times their role as *administrator* and *clinician* work for or against one another, both causing stress, or one more so than the other. One stated:

> And there are days when things are clinically challenging and there are days when they're administratively challenging. You know when you get feedback from your superior that when a patient outcome isn't what you hoped. When you realize there's a patient outcome that's negative as a result of an action that I did or didn't do. I think all those things come on a weekly basis, unfortunately. And so, having really devastating moments, no I haven't had one of those in a while… But again, the minor devastation sometimes adds up. *Interview Participant A*

The second participant, who crafted their resignation letter as an outlet for their frustration, discussed how their role as administrator and clinician were inextricably

linked and how they were unable to compartmentalize these interconnected aspects of their roles which manifested as conflict:

> I think that touches on probably one of the biggest, so you know I've talked about my, my drafted letter of resignation in my email box for the administrative position, but honestly, I feel like if things were different on the clinical side, it would significantly decompress, my administrative responsibilities and make it easier for me to do those. And, maybe this side, the clinical side, is actually the biggest contributor to my frustrations, just with work in general. *Interview Participant G*

Not only did participants experience overlapping role responsibilities but the excess number of tasks any one role may have may be overwhelming, energy depleting, and cognitively draining. Thus, the experience of workload as a quantitative absolute number of tasks needs to be considered.

***Workload***

*Workload* as it pertains to patient care and encounters was experienced at times as an excess of responsibilities at an unsustainable level resulting in experiences of exhaustion and a feeling a lack of time to accomplish all the given tasks. This experience was situated in the context of navigating the reimbursement and profit driven perspective of leadership where time and number of patients, procedures, or "cases" are indicators of "productivity." As one participant described:

> Yeah, the other big frustration is the financial structure with our department and the at [institution] physicians is set up is that our whole department gets paid for the amount of work that our whole department does. And then our department is responsible for hiring the right number of [specialist] to cover the work so if we want to be. If we want everybody to make a billion dollars, we could have one [specialist] raise then that would work. And then if we want everybody to make, like $10, in the year we can hire 1000 people. So, it's all just divided out among all of us, and it's all divided equally too. So, there are many things that our efficiency depends upon that are not under the control of our department but under the control of the hospital system *Interview Participant G*

When framing healthcare work as numbers of cases and productivity, what is often overlooked are all cases are not the same complexity, with each their own unique challenges and attributes. It is not placing the same widget in the same round hole every day. Thus, to compensate, participants described multi-tasking, eating lunch at their workstation, allocating time, and assessing life and work priorities, and all the while being engaged in mentally exhausting work. One participant described it as:

> It feels like our administration has been gaslighting us, telling us we're crazy to think that we're working hard. When I see it every day, I see how hard all my colleagues work. It's nonstop. It's not like, and maybe this is a false caricature of other medical specialties, I don't know because I don't live the experience of other specialists, but my experience as a medical student told me that, surgeons have downtime while they're waiting for their patients to go back and get their surgery, they catch up on other stuff they do their emails they do things that need doing. Medicine, you know they read up on all their patients they do there, but they have no shows, and they have things that happen that allow them to again like catch up on their emails and do their administrative work. We don't have that, like we're working, you know, pardon the expression like balls to the wall the whole nine-hour shift that we're there. And it's mentally exhausting work. *Interview Participant G*

Furthermore, the lack of control and autonomy was observed with a participant experience in the clinical setting, as they were trying to see both their patients as well as the normal complement of resident patients, all the while new patients were being added to their schedule:

> I arrive as [participant] is seeing patients of her own. The residents are actually off today, which is why [participant's] schedule is overbooked, and appointments overlap. Her schedule was whatever patients the residents were supposed to see thrown on to her schedule. The [participant] claims "no regard for my time and just threw the patients on the schedule..." *Observation Participant C (Fieldnote)*

Further, taking a true vacation was often not without consequences and often involved rescheduling patients, overbooking, or informing colleagues of patients they may have to see while they were away:

> [Participant] was supposed to see this family on another day but she took days off and said that they could reschedule. [participant] states that even taking time off means that you sometimes have to overbook, she is scheduled to see 7 patients this morning. *Observation Participant C (Fieldnote)*

Furthermore, when being away, patient requests and other aspects of patient care were still sent to this participant's "inbox." This "inbox" referenced in the observation was within the EMR where medication refills, patient requests, physician referrals, test results, and multitude of other matters were sent to be acted upon by the physician or support staff. As such, when the participant was away, they simply could not place an away message as one would for their email but had to ask other providers to manage their "inbox" for them. Thus, participants' time away added extra work for colleagues, or as some participants state they even access email and text while on "vacation." As a participant described the unsustainability of their current workload:

> I have a meeting with my supervisor when I told my supervisor, my supervising physician who's wonderful and she's a friend, she covered my inbox last week and so she saw how awful it is. I said I don't know what to do, right I can't, maintain this, and her response was, I'm experiencing the same thing. It's like, I get it. That's not what I wanted to hear, but, I mean, I know you know my pain. I'm still feeling pain. Yeah, so that's, been kind of frustrating. You know, think like, oh is this new normal, or is it going to get better, and I can't see it getting better, which is always frustrating. You know, so I don't know… *Interview Participant C*

Additionally, the constant connectivity to the traditional email inbox was experienced by a participant as a state of being overwhelmed:

> Well, right now it's death by email, I'm like completely exhausted right and so I still have some problems to solve and work clinically still in catch

> up mode from COVID and we're trying to do my master's thesis and I'm trying to do all these things. *Interview Participant A*

The experience of a lack of time coupled with a multiplication of tasks resulted in feelings of exhaustion. As a participant described their individual experience with mental exhaustion, they stated: “I mean, just pick your week I don't know” *(Interview Participant B)* and went on to further describe their experienced lack of time to accomplish weekly tasks: “So I yeah I wish there's more but at the same time, there's already not enough days in the week to get everything done.” *(Interview Participant B)*

Another participant described it using an analogy of a house of cards, thus an act of multitasking multiple tasks and responsibilities:

> I think, I am very much a person who understands commitment and responsibility, and will push through and at some point, there's a breaking point oftentimes you know we talked about the house of cards, and I think I'm truly one that lives that way, and I will keep stacking and stacking, but if the wind blows, we're in trouble. *Interview Participant A*

The above quote was from an earlier interview, with the following from an interview almost a year later and demonstrates how the COVID-19 pandemic may have enabled this particular participant to evaluate their own priorities as they respond to always being asked to do more:

> People move to different leadership positions; I think there's been a lot of motion. I'm sure you've read some literature about knowledge workers and them exiting to an extent during COVID and I think that's part of it is that oftentimes many of us are just asked to do more. And at some point, you got to trim some fat and figure out where your priorities are and COVID let people do that… *Interview Participant A*

Thus, it may not be the role per se causing stresses but the amount and constant asking more of the individual encompassing certain or multiple interrelated roles. Further, the roles the participants assumed in their profession and career do not occur in

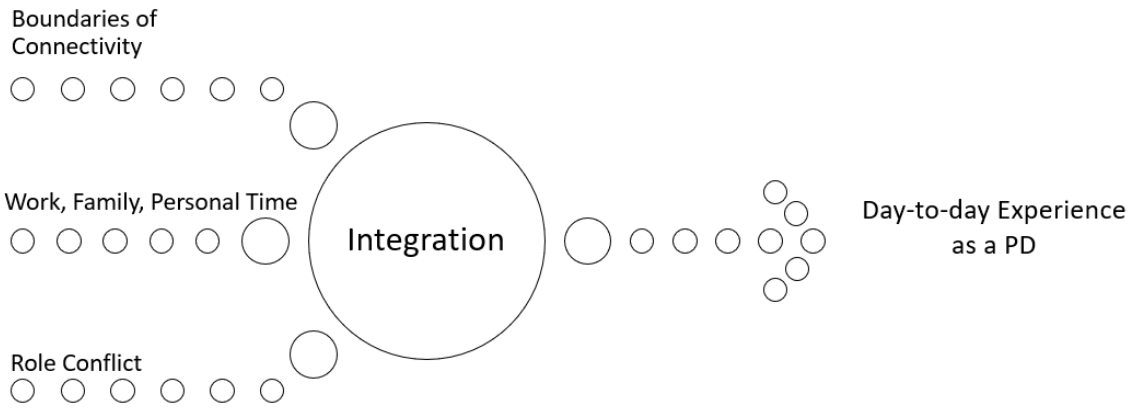
isolation or are context free, as they are persons with lives, experiences, and identities they assume outside of their professional roles. A director of a residency program, as mentioned earlier, it is a role where tasks merge into their home-life, as well as home-life merging into work-life. To follow is the exploration of how the participants integrated these various aspects of their life and boundaries which were or were not formed.

### *Integration*

There is often a thought of "work-life balance," which conveys a meaning of work and life on a scale in a zero-sum fashion, either working for or against one another to come to some equilibrium. Thus, *integration* may be a better representation of how a person navigates the complexity of a work-life situated in their own experiences of a home, personal, or non-professional life. The experiences of conflicting roles, how they attempt to set and honor boundaries of connectivity, and how work, family and personal time interact is integrated into how participants manifested their day-to-day experience as a PD or APD (Figure 4.5).

**Figure 4.5.**

Title. The integration of roles and conflicts.



**Boundaries of connectivity**

*Boundaries* between professional roles and responsibilities with home or personal time were often blurred which was attributable to the ubiquity and ease of digital, in-the-moment communication, thus the ability to be constantly connected to work. Boundaries and expectations of connectivity needed to be delineated to ensure downtime and replenishing of energies. However, this was often challenging, as a participant described their mindset and outlook on the type of position a PD assumes:

> But then it does spill over to nights and weekends when it needs to, you know, and so for me again I think part of it is just understanding that it's not a job that you can do in a set specific specified period of time, and I think administrative jobs are not like that anyway. *Interview Participant A*

One reason for blurring of professional and "away" time was in order to address resident concerns while at home or on vacation. As a participant discussed during an observation:

> [Participant] was away with her family on spring break in Florida. [participant] states "I am not one who can disconnect or turn off easily, so I spent a lot of time not relaxing and following up on emails...." To which one of the reps asked is it more to do with patient care or administrative tasks [participant] "administrative... checking emails from residents and taking care of those things... *Observation Participant B (Fieldnote)*

Highlighting the experience of constant connectivity, which is not only instigated by emails of resident concerns, but in the setting of clinical responsibilities with patient access to electronic medical records (EMR) or as one participant stated their EMR inbox is the "medical Facebook." Not only does the EMR consume considerable time, but it highlights the integration of roles and blurring of tasks as clinician and educator of not only consuming the participants' own time but the concern of how to properly model and educate the residents to efficiently use and manage the EMR:

> It's really challenging to not let that dominate your day, so I have patients I have to see, I have refills, I have results that I have to answer I've,

> medical, only I have this medical Facebook and I have to respond to every post on it. I'm struggling with knowing how to, and also trying to learn again to teach that. *Interview Participant C*

To further the point of teaching residents how to manage and interface with the EMR, one participant saw this as a growing challenge as a PD and how to not allow residents to become exhausted and overwhelmed:

> I think that kind of concept of wellness and boundaries with GME and also just how that overlaps with professionalism. You know they get so burnt out from EMR that they're on it all day, but then they're not going to check labs or follow up labs, kind of where does it overlap. *Interview Participant B*

A participant described their experience with the EMR to a Pandora's box: the technology is capable of allowing constant connectivity between provider and patient, but the logistics, how, to what extent, and who has access is not fully vetted. One participant described how this creates a scary scenario:

> And then, how do I role model it. So, I think as far as expectations of patients change, and as more care gets pushed into the outpatient setting, and patients are more health literate, and literate enough to engage in electronic conversations, how do we keep people from being left out. How do we keep ourselves from being burnout and then how do we role model and teach that to, our learners? That scares me. I don't know. I don't have an answer for that and so sometimes that makes me want to retreat back to sort of old, old timey stuff like teaching and feedback. *Interview Participant C*

The use of digital and instantaneous means to communicate with healthcare providers has enabled communication of a marginalized and a diverse patient population that may not otherwise have access to a healthcare provider. Yet, participants claim they have yet to figure out how to make this sustainable for both the provider and the patient. A participant described this experience of the constant connectivity:

> I think it's always tricky to figure out how to meet patient's needs and not burn ourselves out, so I've seen one aspect, you know people who are very

> comfortable using the EMR and I actually have a diverse patient population that uses my EMR, I have people who I mean, they have, a certain level of literacy, they may have very low health literacy but they, certainly have a high level of literacy because they can send me messages on an iPad, find it really challenging meet them where they are, like they're sending you multiple texts and essentially it's a text and that's creating a lot of work for me. *Interview Participant C*

As they have evolved as a clinician and PD, a participant described how earlier in their career they allowed direct patient communication via text or personal phone. As this participant discovered not only was some communications often not warranted but grew concerned with the medical legal implications of patient outcomes:

> It was hard and they would, text for stupid things and, if I didn't reply. Then there's also medical legal implications of those summary conversations as well. *Interview participant B*

An alternative experience with patient communication after formal working hours was viewing this availability as part of the role as clinician identity. A participant described how they respond to patient communication:

> I want to do that because I would want my physician to do that, simply. So, they text me and you know it's maybe after the kids are in bed, it can be at night. At night it's not often but it does happen, and I mean I have to respond sometimes. The truth is I can respond, I'd say, 90% of the time without pulling their chart up just because I know them well enough, but you know sometimes that means, driving to the office blowing the chart up and the whole thing becomes an hour because it's a long conversation and, but I mean that's what your physician for so that's sort of that
>
> …but you know patients call me on the weekend or text me at night, because the truth is the rest of the infrastructure is not perfect and I can't get that patient satisfaction or feel have them feel cared for, no they can always reach us, unless I give them my cell phone number. There's no real-life alternative from the current infrastructure *Interview Participant H*

As with the previous quote from a participant describing their decrease in communication and constant connectivity, two other participants described similar experiences of reducing the amount of availability and prioritizing time away from work with family:

> I tend to try to think of myself as. So, I know this is terrible like classical like boundary setting and like, prevention of burnout and that sort of thing but I typically tend to try to think of myself as kind of always on, and potentially available. I don't do that as much as I did maybe even just a year or two ago, like via through text or whatever else. I think like the whole my family knows and doesn't seem to resent because it doesn't come up that often they don't get a random thing that is I have to deal with it like right now, but I tend to think of my administrative days as more flexible. *Interview Participant G*

Another participants' experience with how they go about setting boundaries:

> But I will, I think I'm better at using some of my own time and making sure I don't work 100% of the time I could work. For example, my kids are, they're on a rock-climbing team. And so, they have practiced pre-COVID their practice from six to eight Monday Wednesday Friday. I just used to work till eight o'clock every Monday, Wednesday, Friday when I would pick them up. And that's just not sustainable. Finally recognizing that it's not sustainable. And whether I went out to dinner with a friend or worked out instead, like, okay, six o'clock I can be done working and there are things that just have to be put to the side. And that's just, yeah, I think I'm better at that than I used to be I'm not perfect at it but on the other hand there's just a lot to do. *Interview Participant A*

For participants drawing their own boundaries, it was often attributed to a "generational perception" as more late career PDs were trained with norms of being on and available at all times, contrasting with earlier career faculty who have a differing perspective with a compartmentalized boundary setting. One participant described it as such:

> I think the definition of success has changed. So, my beeper was on 24/7 365, for 13 years in Massachusetts. Nobody wants to do that anymore… That's part of it. I think, don't take this the wrong way. I think the whole hospitalist mindset has really affected how people think about medical education. Because, for the first part of my career, if you are an APD, your program faculty, you would come to a meeting early in the morning or after work. For a while that we get our ranking meetings on Saturday mornings. I know no one wants to do anything off shift. And if you're on shift, you have other responsibilities. So, half the faculty show up for meetings. We had to cancel morning report this morning, because the hospitalist whose team was supposed to be at morning report, decided they

> were just too busy to go to morning report, that never would have happened. *Interview Participant D*

Boundary setting and integration of connectivity of work roles was one aspect of the participants lived experience that was a source of concern, along with teaching and modeling boundary setting to residents. The integration or not being able to turn off from connectivity was where the blurring of work roles merges into other aspects of the participants lives. Thus, the next subtheme explores the blurring of work and family/personal time integration, not only in regard to how work roles affected home, but also how family or those personal relationships affected the work role.

### *Work, Family, and Personal Time*

*Work, family, and personal time* subtheme describes a bi-directional interaction of participants balancing and integrating work responsibilities with their partner and/or children and how to manage these competing demands of work and home roles. Family illnesses, stresses, and other demands at home were all competing for the same time and energy from one individual. A participant described their experience as how to manage and from where to draw the extra effort, if even feasible:

> And it's just, if all the different jobs have deadlines coming up. And let's say, the kids are sick or something at home. So, you have these multiple competing things and then it's just hard after they're in bed or so are they all night it's kind of hard then to put in the extra effort to manage all the deadlines. *Interview Participant H*

This same participant was mindful of the level of understanding and commitment from their partner in order to pursue their chosen career path, otherwise the position and career may not be sustainable. They stated, “If things go well, that's fine. I have a very understanding supportive wife otherwise it wouldn't work.”

Integrating work and home life allowed for autonomy and flexibility to take on tasks when there was sufficient energy and time to be devoted to those tasks. One participant described moving tasks to later in the evening or when they have the necessary energy:

> I feel like I'm dealing with enough things and sometimes I have the energy to do things, you know starting after the kids go to bed, and I might, work on something for a couple hours after the kids go to bed and I'm just doing it. I feel more flexible about my administrative time, and I'll go get a haircut, you know during administrative day. I do like having that flexibility to be able to say like, I know I work a lot. At other times, so I'm okay like maybe not working at this time. *Interview Participant G*

The same participant further described how their partner who assumed family responsibilities had enabled them the flexibility to perform their professional roles:

> My wife does not work, she is at home with the kids. Now that the kids are in school, she's volunteering, a lot more but we have over time kind of settled into both of us are from more of traditional backgrounds, and we both kind of settled into more traditional home roles, for better or worse, and it allows us both to do things that we both enjoy and we have a lot of conversations about what it would look like to do things differently. In fact, once all the kids were in school, we had a conversation about, would you like to go back to work, what do you want to do how do we want to arrange this and she was like, no way. What she did before. She was a financial aid office, and she has her master's in anthropology, she did while I was in medical school too. So anyway, that gives me a lot more flexibly like she's super gracious about, responsibilities with the kids and how that competes with work responsibilities. *Interview Participant G*

For other participants reflecting and being self-aware of how well they work at home and what tasks allow them to still be engaged and present with their children was one thing described as a positive throughout the work-from-home aspects of the pandemic. One stated:

> I think, just trying to shut off more at home, which is, the early pandemic that was hard because we're working from home and now, I think I've, I know that they're certainly busy work I can do at home and I can still be engaged with my kids and talk to them, there's certain things I just can't.

> If it’s like charting, I have to be fully somewhere else. So just knowing that about myself I don't work from home very well so, if I really need to get stuff done, I need to go somewhere else. *Interview Participant B*

However, the integration of work roles and personal time was bi-directional as home conflicts or stressors had an effect on their work roles. The experience of a participant having to take on new and ever-changing stressors of raising children was expressed as a home stressor being a “bigger” stress than any work stress:

> I mean there's absolute spillover there's still you could sort of see the line of demarcation. I mean, you probably know this as a parent there's no stress like home stress and there's no stress like kid’s stress, so I think my home stressors are always bigger than my work stressors and, as life goes through. I think that becomes even more apparent because I encounter new stressors at work fairly infrequently, they're really the same old stressors. And so, it's like okay I know how to approach this. But I've never had an 18-year-old, I've never had a 14-year-old before so. So, I think for the rest of my life the home stressors world will always be a bigger deal. *Interview Participant C*

This same participant during an observation stated they wanted to conclude all of their work duties to enable them to be fully present with their son:

> [Participant] is taking time off tomorrow so that they can spend time with their 18 year old son, who started college but had a "rough semester... so is taking a break..." [Participant] tells me that they don’t want notes or anything to distract them tomorrow "I want to be present... my son told me that I wasn't there for him when he was 14 going through some stuff, he said I was with his sister more... I wasn't there for either of them.... kids can see through your bullshit and know when you aren’t present, they can pick up on that... there are times when I go home, and I am thinking about other things... I know I am". *Observation Participant C (Fieldnote)*

Another participant also described how family stressors can take precedent over work stressors, to where it may not be sustainable to complete work roles, as a participant stated “so, you know, if something happens bad in my family. It's all over.” Thus, it may be folly to view participants in a vacuum of a work role, and delineate, segregate, and

compartmentalize their personal lives. Both their work roles and personal roles interconnect to create an inseparable lived experience.

### Role Conflict

*Role conflict* was experienced as discord between role and within role and was manifested as conflicts between educator/clinician, clinician/administrator, role responsibilities/personal characteristics, allocation of time to various roles, family/ career, generational, future, and expectations of school/program. An experience of balancing conflicting roles of clinician and administrator was demonstrated in an observation, where the participant experiences this balance as “mental chess”. On the one hand, they needed to see patients to fulfill time allocation and usage as a clinician, but on the other knowing they have future administrative obligations:

> As we head back to the staff area, [participant] states "I am not super backed up, I try to write notes as I go but not always..." They check their schedule and has a couple of more no shows "it is like playing mental chess, do I try to add patients, but don’t want to later in my schedule since I have 3 zoom meetings later..." I ask what these are for, and they state for the residency program *Observation Participant C (Fieldnote)*

A discord may not only manifest between roles but in addition to personality traits. A participant discussed how in-person interviews can be draining as an introvert and how this was corroborated during a discussion with a colleague:

> This faculty [non-participant] goes on to say that she is a good one and doesn't let a lot of people get close to her. This something I have come to appreciate, and she recognizes she is introverted, as in our last interview she said so much. Also describing how "extroverting" all day in face-to-face interviews can be exhausting. *Observation Participant B (Fieldnote)*

A program director must remain a neutral party or arbitrator between residents and faculty, nursing, or other organizational members, while maintaining their relationship as a clinician and resident advocate. This often entailed negotiating with not

only faculty in their respective departments but also during interactions with nursing and other healthcare team members. An observation captured the various parties' participants mediated (e.g., residents, faculty, nursing, and institutional differences):

> "Assuming it is kind of coming from that nursing perspective what do you guys think are some possible solutions and ways we can address this? We currently do our nursing physician meeting it kind of fell off with COVID. But we're having our first meeting of this year on September 21. What else do you think we can do for that nursing physician relationship?"
>
> The PD (participant) asks a faculty member at the facility in question about ways to improve the trainee and nursing relationship. This faculty thinks by having open forms of communication between the residents and nursing is a start. By having both parties sitting down in a space together is a good thing and that sometimes different professionals make assumptions about others knowledge base that are not true.
>
> "_____, you've been a long time [institution] faculty? How do you kind of see the trainee and nursing relationship or ways we can improve?
>
> The PD (participant) has taken part in the group rounding and morning huddle, but it's challenging to get the buy in from faculty to do it. *Observation Participant B (Fieldnote)*

Negotiation took place when residents needed time off for self-care or other appointments, and thus the participants needed to cover resident responsibilities. As a fellow faculty member, participants have to straddle the fence as both advocating for residents all the while trying to be understanding to fellow faculty members. As described by one participant:

> My impression for the residents I mentioned last week at the revenue meeting was that it was more of a self-inflicted inability, like they don't want to put peer pressure on their peers to cover and when a resident has an appointment, one of their peers has to kind of step-up and cover. And so, it's that kind of internal conflict. And also, the impression that, residents are the ones expected to cover and not necessarily faculty, and how do we maybe kind of change that culture in which faculty can help in some of these moments? *Observation Participant B (direct quote)*

Juggling and managing the many tasks within roles was difficult to balance for some participants, but the additional effort of needing to justify their time to meet departmental or leadership expectations created incongruency, thus imposing participants to become extremely efficient. A participant reflected on the number of jobs and the challenges they present:

> That's actually tricky. So, as things change a little over time. And then, it's always challenging to balance the different jobs you have, and how to get them to be just one job. How you can defend it to your real boss and the other bosses you have, so that's a very challenging topic. I usually, consider myself very efficient. So, you know I take time to debate things but then if it's about to execute I just, I can move fast. So usually, because of me being relatively efficient and managed to juggle things okay without disappointing any of the bosses… In those moments, it's more when I think, you know what, I don't think I need some of them, I mean there, I will be fine with one job less, it'll be just fine as well. It's not that I would be sad. It's not that we miss something, but you know it's academic medicine. You don't live on the deadline you deliver a week later; many things are fine still. *Interview Participant H*

The efficiency required and needed in order to accomplish these tasks is not only dependent on self but a multitude of other persons, time, energy, and willingness to contribute to the resident program. A participant described their experience with roadblocks in accomplishing tasks:

> I don't know how much of that has to do with flexibility to do what you want. I feel like there are so many urgent items that come up regularly, that take up so much of my decision-making mental energy, that it's not that I don't have the flexibility to do the things that I want, it's that I don't. It's that I've come up against so many roadblocks to doing some of those things in the past because so many of them are dependent on people having the inertia or the, interest in helping out with things. An example might be, even just something as simple as like scheduling noon conferences. I would love to do a setup where we have during a given week we have a similar topic but building, one topic on another on another on another but that depends on getting people excited enough to be able to prepare things that are valuable for the residents, and to get them to stick to that, that day that they committed *Interview Participant G*

While this last quote is lengthy, it encapsulated the competing roles participants assumed in any given day as they juggle meetings, clinical responsibilities, managing emails, and all the while hoping against hope an emergency in the residency program doesn't materialize, throwing the delicately orchestrated day into chaos:

> Maybe an example of a day that has the potential to take a lot out of me would be today. Now, I have had like an hour meeting this morning, which was, but like it was valuable, we were introducing a new program coordinator that I talked about and then my shift is from 1 pm until 9 pm. It's a little bit of a truncated it's an eight hour instead of a nine hour because the hours are a little funny and onerous in there I need to fit a two-hour meeting, a two-hour GME meeting. And I'm supposed to be during that time responsible for, for reading all of, I'm one of two [specialist] who will be reading all of the, ER, studies that come in not just here at [hospital], but also at, you know, all of the [institution] hospitals ask me what how you cover all of them, I'll get from wherever yeah so, so I'll be like, in the meeting, and also, like, one of the only [specialist] in the, in the state, or not so for all of the _____ that come into the head CTS and brain MRIs spine stuff. I'll have one other person and I'll have to ask some of my colleagues if they can help me cover this stuff all, I'll try to do my best. Over the last few years I've really bumped up my speed and my efficiency, to be able to do some of this stuff, but at the same time like I dread the email that might come in where somebody has something important that comes up in the residency, and either I need to address it personally or try to delegate it to a person that I know will actually handle it well, all while doing this, and, like I'll be responsible for staffing residents at the same time .I know I can do it, I don't have the same feeling that I did, when I first started as faculty nine years ago that like today might fall apart and it might be, literally the apocalypse because of my failures. I don't have that sense anymore, but I don't like asking for help on things that are really supposed to be my responsibility. There are days that it's just a lot, and I wish that there was a little bit more space in the workday, to be able to know it would be fine. So, I think a combination of days like that and some of the other challenges that you talked about
> *Interview Participant G*

In addition, the above quote demonstrates the feeling of having to become efficient, and be able to solve the staffing issues for themselves, where the institution could instead provide necessary infrastructure to mitigate the multiple roles being assumed at once.

Table 4.2 provides a summary and overview of the major theme, *Integration and the "Hats" They Wear,* and supporting subthemes.

**Table 4.2.**

Title. Summary of Major Theme *Integration of the "Hats" They Wea*r

| **Major Theme:** *Integration of the "Hats" They Wear* | | |
|---|---|---|
| **Subthemes** | **Sub-subthemes (supporting subthemes)** | |
| Roles | Advocate | |
| | Educator | |
| | Administrator | Recruitment and Interview Process of Potential Residents |
| | | Resident Morale and Behavioral Matters |
| | | Accreditation |
| | | Resident Case Volume |
| | | Curriculum |
| | Clinician | Workload |
| Integration | Boundaries of Connectivity | Work, Family, and Personal Time |
| | Role Conflict | |

**Motivation and the Meaning of Their Career**

Managing the "ups and downs" and other aspects the participants experienced as exhausting, draining, and time consuming was counterbalanced with feelings of finding *Motivation and Meaning of Their Career*. These provided the purpose, resilience, and the "why" of their career. This encompassed the factors or attributes which led to becoming a clinician educator which include the meaning, access to energy, and satisfaction they receive from their career. These factors, attributes, and interests were a source of meaning when challenges arose and were a source of continuing growth. This major theme was explored through the participants' experiences of autonomy, and how autonomy allowed for opportunities for growth and the alignment of participants' values with the institution

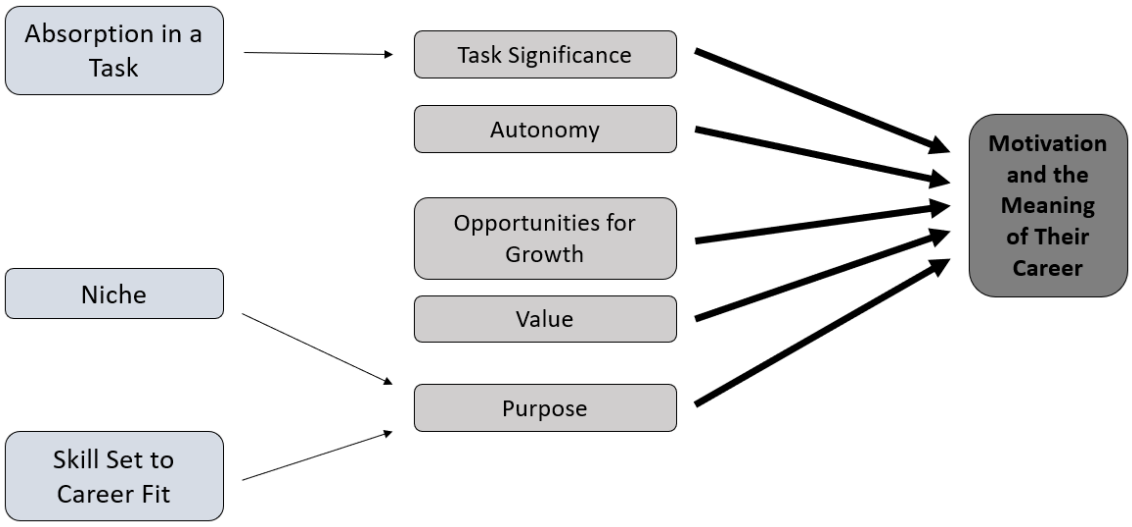
and leadership. Further, this theme encompasses the purpose and meaning the participants found in their career, specifically how they identified within a niche and the alignment of career fit to their skill set. As such, they found fulfillment and meaning by engaging in those areas of purpose, assigning task significance, and moments of complete absorption in the task. See Figure 4.6 for an overview of the major theme *motivation and the meaning of their career*.

***Autonomy***

*Autonomy* was the freedom to be intrinsically motivated to perform tasks the participants found to promote their individual growth and the growth of their residency program. Further, the leadership promoted and allowed this freedom, thus, it was viewed from the participants' lens as evidence they (leadership) would not micromanage their every move. Specifically, this gave them ability to shape projects, curriculum, or

**Figure 4.6.**

Title. Overview of major theme *Motivation and the Meaning of Their Career*



initiatives they found to be motivating and meaningful. A participant described the freedom they experienced in exploring initiatives they find motivating:

> If I want to work on an initiative and this initiative fills a hole and fills an educational need. I can do it. I mean I have such free rein. Sometimes I feel guilty because it's not like, oh, I'm just kind of stuck in what I need to get done. *Interview Participant C*

As the participants have evolved within their roles and developed mutual trust between themselves and leadership, they felt a sense of earning more freedom with initiatives, as a participant stated: “But as I've grown in my role, he has let the leash out a little more every time” *(Interview Participant A)*

As this trust developed, their use of their time became more flexible and they were able to build a day that was conducive to their needs. The time-allotment of “administrative time” provided to PDs and APDs is a requirement stipulated by the ACGME in order for those in the position to have sufficient time to complete the roles and tasks. Because of this allocated time, the participants used this time to their advantage to be flexible and autonomous in their work-day to complete tasks when they felt energized and also to take time off if necessary. One participant described it as:

> During administrative day and I do like having that flexibility to be able to say like, I know I work a lot. At other times, so I'm okay like maybe not working at this time. *Interview Participant G*

A participant who was early in their career, in addition to having fewer years as a PD, described their experience of being able to be intentional and choosing when their time may be used and becoming proactive with their time:

> I feel like I've been able to be a little bit more intentional and really carve out the time. I feel less in panic mode as I did in the beginning, and I don't know if it's the pandemic or just in time or what, but it feels better. It feels like things are slowing a little bit at least for now. *Interview Participant B*

As the participants found the time and autonomy to initiate projects in various areas, they found impactful for both themselves and as the residency PD, as a byproduct they learned to become more intentional with their time. Next, the subtheme discusses the experiences of how autonomy allowed for participants to take on projects which the participants found to contribute to their *opportunities for growth*.

***Opportunities for Growth***

Autonomy afforded the participants the freedom of *opportunities for growth*, but their own personal mindset of wanting to continually improve and self-educate was just as crucial for this growth to occur, i.e., a growth mindset. A participant discussed their involvement in an area of interest, a Diversity Equity and Inclusion (DEI), which autonomy and a growth mindset enabled them to pursue:

> And I'd say this past year my kind of main focus outside of my norm has really been our DEI efforts within our department, residency and then the larger GME, I served on a couple of committees and really was able to see our work come to fruition over the course of a year so I'd say that's probably been another budding interest. *Interview Participant B*

Furthermore, having the flexibility to build curricular projects offered the participants an opportunity to connect with residents which they found meaningful, and as one participant stated:

> I'm always excited to see what we come up with next, because we have this wonderful ability to do these small group sessions with, residents 8 to 14, which is so sweet to be able to do that. And so that's sort of an ongoing curricular thread we couch it in wellness, but it's really about sort of communication and about the hidden curriculum, there's always other aspects of the curriculum that aren't necessarily taught, and so we wanted to bring those aspects out. You know could be debriefing losses or mistakes or, mental health, wellness, I was so excited about that. *Interview Participant C*

The same participant described taking on a project encompassing feedback, which is something they found intrinsically motivating and meaningful:

> Yeah, it's sort of broken [feedback process] but I don't know anything about the making the model, the original process. That'll be fun because that is something that's near and dear to my heart, and then trying to figure out like how to ramp up that feedback or make it more meaningful. *Interview Participant C*

Another participant described being aware of and having a sense of self-efficacy thus bolstering a sense of competence, but also aiming to improve. In so, they described finding time and meaning in taking on a new project:

> Actually, I do a really good job, but it doesn't fit the bill correctly for holistic review that being a single reviewer, looking at applications and I have my methodologies, and they're pretty sound but I'm still single reviewer. And so, I did a lit search and identified other aspects of holistic review and then made a plan and have a plan for execution and so I think that was a day long project for me and it was nice to be able to focus on it, and it's not done obviously I have a plan, we haven't executed and stuff but we'll, beta test before applications. *Interview Participant A*

Opportunities for growth did not necessarily have to be involved, lengthy, and multi-step processes but happened in the moment during their day-to-day clinical role. Embodying the growth mindset through life-long learning was deep-rooted throughout medical school and residency. This was apparent in the observations as one participant was consistently reading, exploring, and asking questions of themselves:

> The participant states: "Keep an eye on it [referring to the patient's condition]". Next turns to the insomnia, the patient reports they have started to take magnesium supplements which have helped them a lot. The participant states: "I know a lot of patients say this, I need to read up on the literature to better understand how it helps with sleep." *Observation Participant C (Fieldnote)*

This self-improvement was often accomplished through formal training via courses, fellowships, or other outside resources. A couple examples were the following participants discussions of opportunities to further their educational knowledge:

> The chair of our department, when I was early faculty set me up with a micro fellowship with an educator out in Boston. So, I spent a week with this well-known radiology educator in Boston, and have done, events, subsequently through a lot of different connections have gotten hooked up with other seminars and teaching conferences that I've participated in. *Interview Participant G*

Another participant described their experience of interacting with like-minded, well-respected, and innovative educators to further their own toolbox as an educator with an added benefit of finding a community to belong:

> The science of it. And so that's what the month that I spent. It's really an immersion month in adult learning theory. Essentially, it was like these amazing researchers 30 years ago did research, but they also did a lot of ethnography as they filmed a whole lot of clinical teaching situations and went through and just identified, that had the literature, like effective teaching behaviors, and then they picked out effective teaching behaviors, narrowed it down and rethought it. You spend a month, basically learning adult learning theory as it applies to clinical education, and it was fascinating. I was like, Oh my god, these are my people this is this crazy. *Interview Participant C*

These opportunities for growth not only enabled the participants to develop skills and further their knowledge, but they also afforded them an opportunity to develop connections and other communities of support and belonging.

***Value***

*Value(s)* are defined as personal morals and ethos, and how these are viewed as congruent or incongruent with the organization, society, or healthcare delivery systems at large. When values were viewed as congruent with stated values of the healthcare system,

it allowed the participant to pursue and excel at those aspects of their career they found valuable, self-efficacious and meaningful. As one participant describes:

> And so, working in an [large system] really aligns with my values because I want to, educate, motivate diagnose and treat. And keep it as narrow as I can. I don't want to be talking about insurance, I don't want to be talking about formularies, I am not the person to give to go in depth with dietary exercise. *Interview Participant C*

Another participant found no challenge in aligning values or ethics to those of the healthcare system but debated about how it applied to all patient populations in society at large, especially those historically oppressed persons:

> I don't know that it's challenged by values or ethics, but rather just the implementation of justice like I think there's no doubt, like we know what's right or wrong, within kind of our environments, it's just, again, how can we make that change in real time. And then I think interested in general the world, and health systems included, you know undervalued women, and undervalued people of color and it's just a reckoning with that. *Interview Participant B*

Being a member of a large healthcare system introduces not only the values of the institution but also the values embodied by other physicians and colleagues. As such, one participant described how their personal values aligns with colleagues could be a source of incongruence:

> But it also took care of a lot of patients that I was used to from [state]. This is different. This is suburban x, urban, private practice. And the physician values are not the same. There's a lot of worry about my own pocketbook, and what kind of car I'm driving that I've never experienced in my life. *Interview Participant D*

The shift in the business model of healthcare delivery, and how that interfaces with insurance reimbursement was another source of value conflict. Participants further explored feelings of being unsupported by their department as the value serving the

patient was at times in conflict with the value of making money. A participant describes how their department had evolved to be more in line with their own values:

> Anyway, he's no longer doing it and I really appreciate the person who's in their role now, but we have somebody coming up right under him now who is the, you know heir apparent, who had some of the same mindset as the previous person that I'm very frustrated by. I think he has done a good job of turning around what I heard were some of the worst physician's satisfaction surveys, nationwide about seven years ago or something, have done a pretty good job being responsive to that. And I feel much less acutely now that this whole system is all about money and pushing things through and just like moving the meat than it used to be, but it's a big organization and it's hard to do that. *Interview Participant G*

Clinical settings where residents are training are less efficient or "profitable" as non-resident settings, in regard to the number of patient visits per day, as residents are limited by the number and length of patient visits. Thus, as a participant discussed how the value of educating residents versus profitability may be mutually exclusive from the leadership's viewpoint:

> So, this is part of my difficulty and differences with my administration. They felt every clinic was the same, and should function the same, and didn't consider that I had different levels of learners. And so, when they were looking at organizational goals and all that kind of stuff and we would be considered just like any other clinic, and so that was very difficult. *Interview Participant F*

During a discussion, the trend of PDs not staying in the position for 10 or more years, a participant described experiencing a shift in values of junior faculty to one of more work-life integrations and not having to put in the extra time outside of the "working" day that is often required to be a PD:

> Like I said, just don't see the value or the benefit of being the program director. Especially starting out, right. Like, it's one of those things it's really hard to do, because you need to put a lot of time into it. Maybe though, yeah, it's just not there for those people. *Interview Participant D*

*Values,* when aligned, enabled the participants to pursue those areas they find meaningful, competent, and valuable; however, when there was an incongruence between personal, institutional, or amongst colleagues they often found it to be detracting from the fulfilment and meaning of their career.

***Purpose***

*Purpose* describes the "why" participants pursued their career path, and it was often through mentors or others influential persons early their career development. The participants described in their formative years those early relationships with educators as a reason or purpose for pursuing the position of PD or APD. One stated:

> I've always loved my educators. I think I've always looked up to my educators so much that I have always had this feeling that I'd love to be in the role that I've always looked up to so much. *Interview Participant G*

Another participant described how they wanted to be involved in education and the path that led them to what they ultimately envisioned for themselves:

> I think I'd like to do that someday and do education in a clinic like that. And he patted me on the back. I went into rural practice. My wife was in the Navy, and I went into rural practice about 50 miles from the Navy base when I finished my residency. And two years later, they needed a medical director for ambulatory care, where I trained, which at that point, was the largest hospital in New England. And he called me up and said, do you still feel that way? And I said, Yeah, and I became what was called then the director of primary care training, which we would probably call it the ambulatory care Associate Program Director now and then when the program director left four or five years later, I moved up. *Interview Participant D*

Early career exploration allowed participants to hone into the specific area of education or practice location they most enjoyed and found to be fulfilling. As described by one participant:

> But yeah, he moved on to UME [undergraduate medical education] and it opened up a hole and I threw my hat in and I was lucky enough to get to

> get it but like when I came up here I thought I want to be a APD, because it was, the best of all worlds clinical, you are writing on curriculum, you're overseeing things, and you're coaching and mentoring. It's like everything all in one that a teacher can be…also I just love GME [graduate medical education, i.e., residents and fellows]. Because I'm working with differentiated cells. I worked with undifferentiated cells in UME for a while and it just, I didn't have the passion, or the, really the skills and I feel like people are born for either UME or GME or they just love it all and I love GME, I just watch them grow. *Interview Participant C*

Once the participants became a PD or APD, this enabled them to fulfill this purpose and then also create an objective or overarching mission of what they envisioned their role as a PD or APD to encompass. A participant described how they view their objective and the joy it brought them:

> I feel like my personal mission is to create a path for people to do what they want and to create opportunity. So, I think that as a program director that's the best part of being able to be a program director is to take a resident who wants to accomplish x and to be able to help them create a path to get there. I tell them when they interview, and I again see it as my mission to eliminate barriers for them to be able to get to where they want to go. And I think that's the joy of being a program director is just that. *Interview Participant A*

Having a purpose or an overarching purpose to their career was a common experience for all participants; at some level they all enjoyed, valued, and respected the position of PD and APD for its educational mission. Within the participants' clinical or other roles, they further refined and were aware of matching what they did on a day-to-day basis and where they did it. This was an active and conscious decision to find their *niche*.

**Niche**

*Niche* was defined as a self-awareness of a unique skill set and finding work that fulfills those skills to allow the participant to succeed and flourish in their position. In addition, this extends to finding a career with roles that are viewed as rewarding, and as one participant described, having multiple roles was something found to be fulfilling:

> I so like being a physician. I still think I just know I would prefer to not do that 100% of the time I also want to do something else. So, while I enjoy the patient interactions, I'm a little worried that alone might not be as fulfilling because I also have other interests. *Interview Participant H*

Finding their specific niche was described as an iterative process of self-reflection and discovery as they started to explore residency options in medical school. The process of self-reflection was exemplified as a participant described their journey:

> I had developed a little bit of an interest in the neuroscience component of medicine, enjoyed my neurology rotation quite a bit when I was a third year medical student, and enjoyed most of the things that had to do with the brain while I was in my first two years of medical school, I didn't even know that [specialty] as a field existed until maybe end of my first year of medical school or beginning of my second year. I had never thought about it. And …. It was during second year of medical school we were rotating around through some neuroscience's booths for an educational day session. And one of those was a [subspecialty] talking about what he did for a living and educating us on some components, and I remember being a little bit toward the back of the crowd and like listening and watching this and it dawned on me that I was like holy cow, wait a minute. People do this for a living. Yeah, this is amazing. *Interview Participant G*

Seeing other physicians' careers provided a moment of self-discovery of their own career path, via as it elicited the areas of medicine which excited, interested, and stimulated the participants and allowed for them to apply those skills in their career. Appreciating these skills enabled the participant to actively form and create a work-life they found suitable to meet their own personal goals and interests as well as conducive and meaningful: "I feel like my skill set is in sort of worker bee boots on the ground. I do like developing curricula, but I like working alongside people." *(Interview Participant C)*

Not only was it important for them to find a niche they wanted to pursue clinically or within a specific role but in a bigger picture appreciating and finding how they belonged in academic medicine. One participant described the importance of this environment:

> I just loved the environment of academic medicine. The transfer of information and hierarchy and staying up with guidelines as well as mentoring and teaching. I fell in love with academics as a concept in residency. *Interview Participant B*

Having the emotional intelligence and self-awareness to appreciate the skills and interest was an important part of the process of finding purpose. However, to further find meaning participants then described how they were able to apply and form a career encompassing those skills.

**Skill Set to Career Fit**

*Skill set to career fit* was experienced as a recognition of personal strengths of participants' skill set and how they were able to translate that into career opportunities. However, one participant described how being self-aware of their weaknesses was also important in deciding what specialty was congruent:

> Yeah, so it aligns like super well and I realize this, like all the time because I work in a situation where I'm on a team, and so it can turn a lot of things that I am an expert and over to my team members, so I am not very good with like memorizing formularies. You know I think my triage nurses are better at triage than I am like who you know who really needs to be taken care of. Today, I would go crazy if I had to do all my own triage and social work. I'm not great at assessing, social determinants of health and putting them in a hierarchy and getting them to where they need to be. *Interview Participant C*

Another participant discussed how establishing a career encompassing various aspects provided further meaning in the type of clinical care and variety in the tasks of any given day:

> There are a few things, it had a good combination of what you're doing during the day, there's some technical aspects to the work, but that it's has patient contact. *Interview Participant H*

Becoming cognizant of how the participants' personality was in congruence with the personalities of persons in their specialty of interest was a key in the process of self-discovery. This participant stated as they explored other specialties, they became self-aware of how one made them as a person:

> I think I had in my mind that I would do something probably surgical. I really liked working with my hands and felt like I had an aptitude for it. After experiencing [specialty] I felt like the personality match wasn't great. I felt like it was bringing out worst parts of me than I would have wanted it to. Or maybe would have to work with people that I found less than pleasant. *Interview Participant G*

Self-awareness even extended to knowing how a participants' skill set was more well suited to certain patient population or community of patients to serve. A participant described how they found these two areas to be in congruence:

> So, I know what my strong points are, and I know what my interests are and working in an [large institution] allows me to be a team member. So, I mean just working in this particular healthcare setting we're in a safety net hospital. I think there's people who enjoy taking care of patients in, more resource rich settings. I mean we're a pretty resource rich setting for the underserved, I think. But we're not [resource rich local hospital], I live up here. I don't want to take care of these people because I don't think that's where my skill set is. *Interview Participant C*

One participant described how their initial impressions of career setting or certain aspects of a career were less appealing but how they were willing to take part in the less savory aspects to enable them to be part of activities were truly meaningful and impactful:

> No, I didn't actually think I'd ever end up in academics, quite frankly, I felt academics was quite frankly more pretentious than I felt I want to be a part of. But I also love the education and mentorship side and so. So that's how I landed in academics. *Interview Participant C*

Appreciating how the participants came to recognize their strengths, weaknesses, and preferences in how they wanted to build their career allowed for a deeper

understanding of the meaning they attached to the significance of a task and how they were able to become completely absorbed in a task.

### *Task Significance*

*Task Significance* describes experiences when participants found moments of joy and satisfaction in their work to buoy against the more challenging aspects. There are challenges with any chosen career path. As one participant stated, there then needs to be a source of joy: "there have been many challenging career moments however you have to find joy in the work that you do" *(Interview Participant A).* An example of finding those moments of joy was exemplified in an observation as the participant was looking forward to the week since it will be comprised of doing what they find meaningful:

> This is going to be a good week, in my element, doing mostly teaching all week... besides my clinic on Thursdays. *Observation Participant C (Fieldnote)*

Discovering aspects of their surroundings and having a sense of belonging with a particular community was a source of fulfillment and contentment. As such, one participant discussed wanting to remain in those surroundings:

> I'm deeply passionate about education…So coming to residency, this was my first exposure to academics, and I absolutely fell in love with it. The transfer of information that comes with staying up to date. Seeing a variety of pathologies and really the mentorship from my faculty was really incredible and I knew that I had to be a part of it. *Observation Participant B (direct quote)*

In their clinical role, participants found rewarding moments to manifest from moments that were simultaneously challenging, as this participant states:

> Difficult things as when you make a recommendation, and the patient doesn't want the recommendation. And then you manage to support that patient to do what they want. That's particularly rewarding because you know they're doing something where you have to do extra documentation because they didn't do what everybody recommends. I need to write a

> document, stating I did this, but this is what they want and then you know I can implement what they want, even though it may be crazy from what many people might think. *Interview Participant H*

This same participant further elaborated on challenging conversations and discussed how the more challenging the situation, often too was more meaningful:

> I don't know how to say, it's a little more fulfilling in a way, this might sound a little weird right, so you have a difficult conversation coming up and you know it'll be rough for the patient. And you go in and share what you have to share and do it the nicest way possible, trying to give hope but no false hope and like balancing all these things. In the end it's sad but, considering how bad the situation is you did a really good job of delivering this tough message and in a way, you can be proud of that. So, I mean this contributes to sort of fulfillment, thinking you did a good job. And in a way, the more challenging the task if you do it well the more proud you can feel. The more fulfilled. And if proud is the right word *Interview Participant H*

As the clinical role consumed emotional and cognitive energy, participants discussed how inserting educational opportunities during clinical roles was rewarding. One participant described how they made time for education during clinic:

> It's sitting down and working one on one with residents in the clinical situation that I love the most...., the thing I enjoyed most from an educational standpoint, is the educating, it's sitting with residents and teaching…It's so much easier and also I feel like so much more rewarding to see the light go on in people's eyes when they understand the concept or they're as excited about my diagnosis as I am. So, educationally I love just the opportunities for education that come up in my clinical day. *Interview Participant G*

Having multiple roles was often viewed as multiple opportunities to have moments of significance, and as these collectively came together to provide an overall sense of fulfillment, as a participant described:

> I mean there's different moments right. Its things go well with patients, and it could be that I have a day where I see a lot of patients just that I treated earlier and none of them have cancer coming back. That's a fantastic day for me you know that rarely, rarely happens but that's great when something like that happens you can go home feeling good. Let's say

> for the residency program, a resident establishes something and actually goes relatively smooth. It doesn't end up this dragged-out fight about who knows what, like it's a pretty good idea. Implementation is smooth you think whoa, I can't believe that happened, because you know these things are rare. On the administrative side if there's a challenging situation and you know it's basically a loss, but somehow magically a solution appears. You feel good about things like that. I like to call it the little wins that contribute to overall fulfillment or satisfaction. Like, I'm complaining but big picture I mean I have a wonderful job, like I do all these cool things and see many things that I feel privileged to see or participate in education or work on new techniques like it is in a way, like an amazing playground you get to play with. *Interview Participant H*

The reward of recruitment, education, mentoring, and administrating was seen as residents grow and evolve into autonomous physicians. One participant described the impact of observing their resident's development:

> I love watching them. I've been fortunate that in three of the four different places. Well, actually, for all four of them. I've been able to watch them come in with putting the stethoscope in their ears backwards and then turning into really good residents and then hiring them as faculty. *Interview Participant D*

As the participants identified significance in a given task, they also described times when they were fully immersed in a task such that they lost track of time and became completely absorbed.

### Absorption in a Task

*Absorption in a task* was a sense of losing track of time, where total undivided attention was given to the learner (i.e., resident) and those moments with patients when one becomes fully present in the moment. One participant, who in addition to having clinical responsibilities was still active in bench research, described how being immersed in attempting to solve a problem was a source of energy, thus wanting to have a "job that has multiple pillars" allowed energy gained from one area to carry over into another:

> To work through a problem and to become immersed in a problem and try to bring that same to lab research. In lab research, you know working on something for a few years towards the big breakthrough and if you can see it through, to close the deal, or really get it done, is when I'm most energized. *Interview Participant H*

In finding their chosen career path in a given area or specialty of medicine where they felt a sense of complete immersion, some participants described how this attachment to the specialty gave them the ability to spend great amounts of time with no apparent ill effects:

> But then when I did my [specialty] rotation, it was a place that was easy to be there for the morning until late at night and it didn't matter to me, the hours and I just enjoyed what I was doing. *Interview Participant A*

This sense of being in the present moment also happened in the educator learner co-creation of knowledge where being fully present allowed the educator to pick up on the subtleties of the learner's non-verbal cues. As described by a participant:

> When I'm with patients that can happen [immersed in the moment, presence with no distraction] when I'm teaching that can happen [attention and presence] in that moment. And it's not long moments but I think I had one yesterday where, I just posited a question to a new intern, and they really had to think about it. And it was this lovely moment in time I was like, okay, what can I challenge them with next as I'm listening to the patient. As the resident is presenting the patient, I'm thinking about looking at their face and I'm, trying to read their eyebrows and their eyes and, trying to figure out what questions they might have or what they might be excited to discover. Oh gosh I don't know I've always done it that way. So, I think those are the moments that still happen where, I'm trying to, what do you need right now as a learner, where can I help. So yeah, those moments, they're real short, but they're sweet. *Interview Participant C*

One participant even described how planning, coordinating, and organizing a multi-day event, such as orientation, was a source of absorption as being an educator was something they value, thus engaging in education was enjoyable:

> I would say those one-on-one conversations with students or residents [specialty] has a lot of those opportunities. Yeah, I'd say those, and I think probably like the orientation that's always a fun kind of two weeks it's stressful planning, but I think it's really fun getting to know them and showing them the basics, so the orientation is always good. *Interview Participant B*

Assigning significance to a task to gain enjoyment, energy, and meaning enabled the participants to attribute meaning in their overall career. Often these tasks are those the participants identified as a value or a reason as to why they pursued their career, to provide patient care, research, or educate. Table 4.3 provides a summary and overview of the major theme, *Motivation and the Meaning of Their Career*, and supporting subthemes.

**Table 4.3.**

Title. Summary of Major Theme *Motivation and the Meaning of Their Career*

| **Major Theme:** *Motivation and the Meaning of Their Career* | |
|---|---|
| **Subthemes** | **Sub-subthemes (supporting subthemes)** |
| **Autonomy** | |
| **Opportunities for Growth** | |
| **Value** | |
| **Purpose** | Niche |
| | Skill Set to Career Fit |
| **Task Significance** | Absorption in a Task |

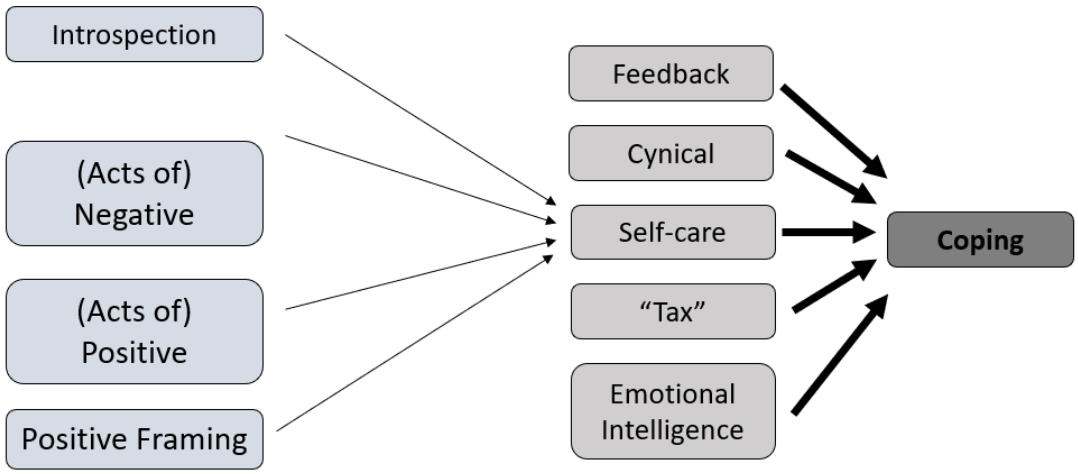
## Coping

*Coping* was described as the cognitive and physical mechanisms or frameworks that enabled reconciliation of job responsibilities, roles, patient interaction, and resident experience. Feedback was viewed as a source of validation as to why they continue to put forth the effort required to administer a residency program. Conversely, when feedback was viewed as coming from self-motivated interest of the resident, or when barriers were

preventing participants from even attempting to find a solution to a problem, participants experienced cynicism. Further, in order to do the tasks or roles the participants found significant or meaningful, it often meant they must do other less enjoyable or outright energy depleting tasks, thus paying a "tax". Manifesting an empathetic position towards residents, patients, and colleagues through emotional intelligence was a way to try to appreciate differing viewpoints and lived experiences. Lastly, self-care was an iterative process through both positive and negative self-care actions, and further through introspection, positive framing, and attention to physical health. See Figure 4.7 below.

**Figure 4.7.**

Title. Overview of the major theme *Coping*




***Feedback***

The subtheme of *feedback* includes external confirmation, advice, and compliments from either a formal survey completed by residents or through anecdotal accounts from residents, leadership, and colleagues. It provided a sense of pride and

satisfaction for participants through knowing they contributed in some way in the residents fulfilling their career goals. With the 2020 resident survey being conducted at the beginning of the COVID-19 pandemic, this was a factor in most survey responses being less than ideal from the participants' perspectives. However, as a participant discussed, the improvement in the subsequent years' scores was a source of validation:

> I think it's overwhelmingly positive, you always worry about if they're just telling you what you want to hear. We have an ACGME resident survey that gets completed every late winter early spring and we got the results of that [survey]. I was expecting it to be terrible with COVID and everything and we kind of went up in every single category, and really showed a pretty impressive improvement I would say from last year to this year. So, I think that was validating. *Interview Participant B*

Not only was the improvement of the survey results from one year to the next viewed as validating, but the appreciation from residents in also knowing they have been cared for was reassuring:

> I think, residents in general have been really appreciative of the efforts of the program, just to keep them afloat. And I think that's been really beneficial to hear they know that they're cared for. *Interview Participant A*

This same participant described their sense of satisfaction upon receiving feedback in the form of recognition of the impact they had on residents, all the while aware of the community behind them making it all possible:

> I think whenever you see, if I start with the program director side of my career, obviously, the recognition of the impact you had on residents and just watching their growth and again that you played a role in that and there's never a resident that was the sole person made those opportunities for them but, we're all contributors and I think that those things always give you some satisfaction. *Interview Participant A*

However, another participant described the sense of personal satisfaction when they were directly involved in the task:

> For me personally I feel like getting, feedback on something that I've done either very recently or maybe set in motion a long time ago, gives me the feeling of satisfaction. It can be something very, very small, but I am somebody who is susceptible to getting just some words of feedback from somebody about that. *Interview Participant G*

Feedback was not only received from residents but also from peers and colleagues. A sense of self-efficacy was experienced especially if feedback, in the form of recognition, was focused on a particular task assigned significance or was viewed as an opportunity for personal growth, as described by the following participant:

> I would say probably being recognized for the DEI efforts. So, we did these awareness sessions we presented it at one of our national conferences back in February or March, and someone saw our presentation and our story about our culture here at [institution], they actually asked us to present, again, to more of a specific educator conference so I think that felt good. *Interview Participant B*

Another source of feedback were comments provided to the PD or APD in terms of how the residents were preforming. This in turn reflects how the program was administered, competency of residents, and quality of resident selection, in other words aspects to which the PD or APD had direct input. One participant described how these comments feed forward:

> I think that's probably true. If you're in large part, one of my residents, I have a monthly meeting with the CEO at [hospital]. And for the second time, since we started the program, a friend of his wife was being cared for by one of my residents. And he actually he obviously gets that information feed that way. And I had a really nice complimentary conversation with him about this resident yesterday. *Interview Participant D*

These various feedback avenues provided a means to sustain motivation and provided validation of the participants' efforts, stresses, and energy spent. This feedback was described as more meaningful if it was directed towards initiatives, projects, or residents' performance thus reflecting and directly validating for the participants.

### *Emotional Intelligence*

*Emotional intelligence* manifested as empathy, expressed as discourse and silence, of which the later participants described as a powerful approach when engaging in a difficult patient conversation. There were moments when this empathetic approach to a patient interaction runs counter to the production- and profit-driven initiatives of the healthcare system, as a participant stated during an observation:

> After we get back to the staff area, [participant] states in reference to just listening to the patient, "This makes me behind in my notes, but oh well I just wanted to soak up what he was saying, that is tough losing your sister." *Observation Participant C (Fieldnote)*

Not only did participants utilize empathy when interacting with patients, they often discussed and modeled empathy when working with residents, demonstrating how an empathetic patient-physician interaction may occur. Empathy was demonstrated in the observation below:

> [Participant] "how did you break the news, was she anxious..." The resident said that he didn't give the patient time to reflect, to which [participant] comes back with "silence is always good, let them sit for a minute and allow them to process the information." *Observation Participant C (Fieldnote)*

The same participant later described how they have evolved in addressing challenging conversations with patients:

> You know, time helps too, because you develop a bit of a thicker skin, your first few patients that you talk to are pretty devastating and over time, I don't know why. I've always been one to wear my heart on my sleeve, so I don't know how I have sort of developed that skin. But I think just doing it over and over. And now I've learned that there are definitely better ways to do it. But I think it's gotten a lot easier. I think, practice, and then listening and knowing how to be silent. *Interview Participant C*

Validation of the lived experience of patients was another avenue participants used in providing empathetic interactions and help build trust with patients. A participant reminisced about a moment working with a resident and how they modeled empathy:

> I remember once a woman who had type two diabetes, who was morbidly obese, one of these very stately black ladies with the hat and the jewelry, big smile, showed up with a granddaughter one day and the granddaughter was loaded for bear. She thought we were going to beat grandma for being fat. It's pretty much what she said. And, and the resident was just getting nowhere. And I put my hand on her hand, I guess she can't do that anymore. And I said, I just said to her, seemed right, in the moment, this is really hard, isn't it, and she started to cry…And that was, we lived with them. But the resident came back and said, that this surprised me, the resident stated as we got out of the room that never would have occurred to me to do that. Now, of course, I was, I wasn't old and gray, and I was probably your age, when that happened. But, particularly in an environment like that, these patients live in the neighborhood, you take care of uncles and aunts and cousins, that sort of business and you get to know them. And if you don't have that kind of relationship, they don't trust you. *Interview Participant D*

Participants further described how emotional intelligence extended to the PD or APD and residents' interaction where they appreciated the uniqueness of the resident's experience within the inherent hierarchy of healthcare, and the differential of experience, and skill set between the participant and the resident:

> I have a certain amount of knowledge and expertise and experience that just makes even a difficult patient interaction so much easier than what they're [the resident] dealing with. And so, for whatever reason I'm just, I'm able to channel that. Not that I've never gotten annoyed with a resident who's like, we've done these 10 times, but I can usually sort of pull my crap together and, like, Okay, you know what, I'm not walking in their [the residents] footsteps. *Interview Participant C*

This was elaborated further during the COVID-19 pandemic where a participant described how the pandemic allowed them to appreciate people's experiences and struggles more readily. Everyone has their own life experiences, with struggles, triumphs,

stresses, and personal matters, and to not project another's external validation onto their own self-worth:

> I would say my kind of biggest lesson is, that it's okay if people don't show up, people have stuff going on, whether it be kind of anxiety or COVID or what and like the world still moves on. Before I would get kind of fixated, I only had like 50% participation in my lecture, they don't like me. That was how I evaluate things but now I realize there's so much more just to let those things go. *Interview Participant B*

Emotional intelligence was an area of medical education that often falls into an ambiguous category that lacks clarity on how to teach, model, and evaluate it, if it is even feasible, i.e., hidden curriculum. Thus, participants modeled and discussed various aspects of emotional intelligence with residents to include empathy which was one component of appreciating the "art" of medicine.

### *Cynical*

*Cynicism* was expressed through pessimistic and skeptical experiences, to the extent that conducting roles were inhibited by the inertia of the organization. This manifested in participants' experiences where they did not even want to initiate an idea that would ultimately consume excess time and energy, thus coming at odds with what participants experienced as barriers. A participant described this phenomenon:

> As I talked about, this all contributes to what I refer to as the 100 email problems. So, when I need something done or changed. I am doing a mental calculus. I would love for this thing to be better for both me and for the patients that I'm taking care of, but it would require 100 emails on my part to get this thing changed. I'm just not going to invest that kind of time to do it, it's all a matter of pestering. A lot of my colleagues have homework stations that they were able to get, to be able to work from home. I started emailing the one IT person, and we got about three or four emails in, and the ball was in his court, and he never got back to me about this thing. I was like, this sounds like a 100-email problem. I'm not gonna do it, again I'm just gonna drive, it's gonna take less time for me to drive into work every day. Yeah. So now you're hearing, the more like bitter cynical. *Interview Participant G*

Feedback viewed through a cynical lens was interpreted as insincere feedback from residents and from a place a self-interest of the resident to better their own standing (i.e., knowing they will need a recommendation from the participant (PD or APD)). Thus, as the participants progressed in their career, they become cognizant that if all comments are positive these may have an alternative motive underlying the intent of the feedback:

> Although, I've also become more cynical as I've taken on this position and wondering how much of those words of encouragement or just flattery are directed at the position for personal advancement by the people who are saying it, super cynical… then there are other residents that I feel like are doing it are saying things because they feel is the way to progress through the system and they know I'm going to be giving them a recommendation at some point. I try to be a very authentic person very sincere and try not to solicit fake comments but, it is something that I think about. *Interview Participant G*

A cynical experience in the clinical role was described as a sense of detachment and concern for completing the patient encounter, to check a box, and move on to the next. One participant discussed how dread at times replaced the feeling of joy for the encounter:

> But my, I know that when I am just kind of like counting the minutes to get, a clinical visit over with. So that's what that feels like for me it's like the sense of dread versus joy. *Interview Participant C*

Viewing the residency program and the institution of medicine at large, a participant described a “culture” of complaining and cynicism, which can make it hard to find ways to solve problems when all you see are roadblocks:

> I think, residents recognize what you've done for them as they're leaving. So, sometimes that doesn't always come in the moment. Medicine has a culture of complaining and I'm not sure if that exists everywhere, but I think there's some of that where sometimes, all you see is problems and no solutions and listening to that is sometimes a little bit hard. *Interview Participant A*

With the effort, initiative, time, and energy PDs and APDs put into accreditation to only have it seemingly appear meaningless and unrecognized resulted in cynicism for some participants. One viewed it through this lens:

> I have to spend all kinds of space in ACGME explaining how you're dealing with a violation [citation of program requirement]. And the next year you get the same violation, and even though you've explained what you've done, that the outcomes are way better, if the residents don't change their answers on the survey, then you still get cited if they [ACGME] don't read any of the crap that you write. *Interview Participant A*

The experience of cynicism was experienced in all aspects of the participants' roles as clinician, administrator, and educator. Thus, this exemplified how a broader understanding of how depersonalization (i.e., detachment) can manifest in roles outside of direct patient encounters.

***"Tax"***

The *"tax"* was experienced as doing the tasks they have to do in order to be able to engage in roles or tasks the participants found meaningful. This "tax" at times was paid in time and mental energy spent utilizing the EMR for patient documentation and charting. A participant described how dealing with the EMR allowed them to do what they find meaningful:

> The [participant] is keeping an eye on her message inbox, where charts and messages which need her final approval populate. The AP states "I am a slow typer, I put up with the EMR so that I can teach and practice medicine." *Observation Participant C (Fieldnote)*

The above was from an observation with the same participant expanding on how all the roles are interrelated and allow them to teach:

> Um, I can think probably one on one mentorship is actually the most satisfying. I do love the teaching aspect. My practice actually drives the teaching aspect, I love my patients. There's a lot about clinical care that's annoying and not very satisfying. And me and my colleagues bitch about

> it all the time, but that to me, gives me my admission ticket to teaching, and my teaching gives me my admission ticket to mentoring. So, it's really interesting how I sort of put up with the EMR because I can have meaningful patient interactions because I have to do to that to be a practicing clinician. I feel I have to teach well, and I have to be in that situation to mentor, I think of it as a highlight builds on each other. *Interview Participant C*

Not only was this "tax" experienced in their clinical role, but the administrative responsibilities were "tolerated" as well. One participant described how it allowed the participant to educate residents:

> I've viewed the institutional responsibilities of being a program director as the tax I pay to do the things I love, because I don't enjoy them [administrative task]. And right now, one of our hospitals is pretty antagonistic. So unfortunately, most of the time, I have not been in that situation. I know a lot of program directors who live in that situation. I don't think I could do that. *Interview Participant D*

This "tax" was portrayed as having its benefits, where participants were involved in multiple roles where a positive experience in a particular role may buffer the ill effects in another. This balance was described by one participant as:

> I feel just have all these different things [roles, responsibilities, tasks] going on, there's always something positive happening in one of them, it's usually some positive things somewhere that sort of distracts you from the bad things. This gives you two days of a thinking break and then maybe you have the idea you need to push the other thing forward. So, in a way I feel doing multiple things helps balance the good and bad out against each other. I never honestly, I wanted to say I don't think I felt that things are not moving, and I should just quit haven't felt that. *Interview Participant H*

The "tax" the participants paid varied, from administrative to clinical tasks, nonetheless participants were aware certain tasks or responsibilities of being a PD or APD were not desirable but were viewed as something to deal with in order to gain the privilege of being an educator of residents.

### *Self-care*

*Self-care* was a multi-faceted construct where the participants attended to their mental, physical, and spiritual well-being. A few of the specific strategies used to enhance personal well-being were through introspection, participants' self-reflections during the interview process, or informal discussions thus facilitating a time to reflect upon their career. Intentionality in carving out time to exercise, meditate, or attend formal therapy sessions were other avenues to provide self-care. However, self-care was a personalized experience for each participant. Additional self-care strategies manifested as positive framing through self-talk, and having a realistic outlook on frustrations, setbacks, or times of an experience of burnout, but seeing as something that shall pass. The opposing aspect of self-care was the negative self-talk, imposter phenomenon, or experiences of having to be present at work when not mentally rejuvenated.

#### Positive

*Positive (self-care)* was an individually unique act of self-discovery and having an appreciation for those activities, persons, or settings that provide an experience of rejuvenation. The participants discussed being of a different generation than their residents and often described having an appreciation for how residents approached self-care. One participant elaborated on this drastic difference from their own training:

> I'm learning, I'm 50 years old and I've been doing a lot of these things for a long time but I'm actually learning some skills from the generation that I'm teaching, which feels, very different from my own, but I'm learning to break up the day. And like, what I really need to do is I need to go for a run. You know, I've got a little space of time, after my next seminar and I'm going to go outside. I call it my micro run because I'm building up from the couch again… And so that's what I'm learning to integrate. I'm learning. Again, learning things from people much younger than me about journaling, meditation, so I am putting wellness into the day. *Interview Participant C*

The specific outlets the participants utilized varied from engaging in journaling and meditation, while others viewed journaling as a burden just one more task to complete for the day. Thus, this illustrates the unique qualities of each participant's positive-self-care activities. One participant describes their self-care activities as such:

> Yeah exercise. I do have a therapist, that's been super helpful and journaling. I've been really good these past few months about journaling. So those are the big three. Yeah, those things keep me going right now. Without those, Like, oh my god. *Interview Participant C*

Additionally, one participant discussed how they utilized their spirituality as an anchor:

> Um, I use a lot of meditation and mindfulness which is how I got through my residency … I'm also a Christian and spend a lot of time at church and in prayer and those types of things. A little bit of exercise but at my last position there was just not time and in the wintertime in Western New York, there was just way too much snow. *Interview Participant F*

In the setting of COVID-19, awareness of family and taking time off for physical illness was viewed by participants as less of a taboo and in fact, encouraged. As a participant described how their relationship with their family had grown stronger and was viewed as a foundation to their well-being:

> No, thankfully, all my family life and personal life has been good. Personally, everything's fine, the litigations are always kind of ongoing but, I think my personal side has been, stronger than ever, through this. *Interview Participant B*

The distinction of physical illness was important to appreciate in the last quote as subsequent exploration of self-care will draw a distinction between calling off for physical versus mental health. Another participant relates how COVID afforded the right and opportunity to call off when physically ill:

> So, I think this year has been good from a physical illness perspective the fact that if you're sick you don't come to work because you may bring

> COVID with you. So, I think that's been good for us to realize you don't have to work when you're physically ill. *Interview Participant A*

Nearly all of the participants described some sort of an outlet for self-care, and while it was not a uniform approach, it emphasized the value in knowing what their own mind, body, and spirit needed to maintain optimum mental well-being.

**Positive Framing**

*Positive-framing* or positive self-talk was being self-reflective and mindful of their own experiences and feelings that enabled the participants to appreciate moments when they may have experienced burnout (as an "unwelcome houseguest") or other low periods. Thus, some participants acknowledged these feelings through self-awareness (self-talk). One described looking forward to the future and how they could learn something from burnout:

> And so that's something I know that it is [burnout] cyclical. For me it's just something that I tend to be a glass, oddly enough, I tend to be a glass half empty sort of person. My initial thoughts I can get over it well and I can put on a brave face, particularly for my learners. Um, but I recognize it. I know it won't last so I try to do whatever the three R's of resiliency are, there's some acronym or something. I try to see into the future and like okay, this isn't gonna last. This isn't everything so I feel I have been such a student of burnout when I see it, and I'm not afraid of it. It is like an unwelcome houseguest it's like well she won't be here forever, so I need to figure out how to live with her until she goes. *Interview Participant C*

Another participant described their positive self-talk as a way of looking towards the future and knowing whatever struggles may be in the present, there is hope for the future: “I chose this career, this was my choice, and it can't continue on like this forever. I just have to get through this period.” *(Interview Participant F)* Not only was it being mindful of their own personal struggles, but participants discussed their struggles to normalize

and facilitate a positive change in current residents. One described how it was important to be open about burnout:

> I guess my personal history of anxiety and depression, and that it really was, difficult in residency. That's something that I've always been really open about to try to normalize it. For a trainee to talk about burnout and just kind of say hey I've been there, try not to, again, talk too much about my own story. But just sort of normalize so I've always done that. But I'm also one who tends to maybe undervalue a little bit what I do or undervalue the well that's just that conversation with the resident. *Interview Participant C*

Applying positive framing to the experience of burnout for participants allowed them to develop coping skills and appreciate the moments that provide a reason to move forward:

> I think burnout, teaches us something too, like there's value in and I don't know that we're ever going to get rid of it [burnout] so I think we have to learn to cope with it and find those times that give us life. *Interview Participant B*

Viewing career in total as an adventure was another positive framing tool used to view their task as a challenge more than onerous or a hindrance. As a participant stated: "The whole thing is a, it's a little bit of an adventure, it's exciting." *(Interview Participant H)* Additionally, positive framing was utilized in clinical roles while viewing the patient-physician relationship through a lens of motivational interviewing. One participant described how to shift patient adherence from one of physician self-failure to one of choice, circumstance, or societal constructs placed upon the patient:

> Or I would say compliance I even adopted a new word you know the new word is adherence. There's probably a newer word, but it was learning a new communication skill. It was initially more about self-care because I used to bring home those frustrations and just feel most of the time, I felt it was my fault. Some of the time I felt like, get out of my office you're wasting my time. Neither are the way you want to feel when you're practicing and so it made me realize, oh my goodness, you know this this really isn't a personal failing. This is the patient's ability and right to make choices about their own care. And there are actually tools that you can use

> to communicate with people to move that motivation, a little bit, but ultimately it is their own decision. *Interview Participant C*

Added to this was an iterative process of developing as a person and having the self-awareness of the moment to appreciate what they and other biases they themselves as well as other persons experiences:

> But when I get stressed or angry. I am trying to just reflect. Why am I angry? I'm not angry at this person maybe it's something my kid did, or husband did. It has nothing to do with them and what am I bringing to this conversation. You know, it's probably been the most thing that I've evolved as a junior faculty is to take a step back, is anyone dying, if no one's dying like everything's probably gonna be fine. *Interview Participant B*

Thus, taking the perspective of arising issues, problems, or stresses as challenges with an eye to the future while having a lens of self-appreciation enabled participants to address these issues in a positive and productive fashion. How participants grew to be self-aware and work through both the positive and negative aspects of their career was through a process of introspection.

**Introspection**

*Introspection* took on a variety of forms, including reflection on future plans, the longevity of their position as PD, and through the interview process for this study and observations which allowed participants time to reflect upon their career. A participant described how the act of writing out their resignation letter was a cathartic exercise:

> What I would like to do, or an example of this might be the drafted email of resignation from my position that I currently have sitting in my drafts. And was it yesterday morning. I don't know, it's very recently that I tweaked it and updated it and was maybe like 60 to 70% close to pressing the send button. So that comes regularly. So, I don't know, it helps because I'll write the email, and then I sit there and almost send it and just say, I'll hold off. *Interview Participant G*

The interview itself was a source of self-reflection, enabling them to process and evaluate where they are in their career. A participant described this process as:

> Yeah, no it's been great, really. I mean, it's one of those things I don't, I will reflect on, my kids, my marriage, generally on the job, but when I'm journaling or when I'm, talking with my therapist, it's almost never about work. So, it's, been really nice to actually be able to think about what's good, what's bad, what am I nervous about, what am I hopeful for. So yeah, that's been super helpful to think about, so it's been a really nice bit of time to reflect on something that I don't generally reflect on, so I appreciate it. It's been a good experience for me. *Interview Participant C*

Over the timeframe of the study, a participant evolved as to where they envisioned their career trajectory. Initially, this participant had not expressed intentions in a succession plan, then as the study progressed, having time to reflect on how the previous year affected them they stated:

> I think that it's time to think about succession planning, I have some big responsibilities coming up in about a year and some change, so I'll be the president of medical staff. And so, I am looking to sort of bring someone into some more, some additional roles like probably not sitting in the seat but I need to find ways to offload some things. So, I'm working through that process now. And I think maybe I have a few years left in me but not a ton. *Interview Participant A*

Introspection allowed the participants to convey how the experience of being a PD or APD changed from day-to-day. One participant described their experience of frustration at the timing of the recruitment email juxtaposed to their current state:

> When you sent me the initial email, not the second, not the follow up a couple weeks ago, the very first email that morning, my wife, had to tolerate me just ranting. That morning, literally yelling and not at her she knew it was not directed at her, but just because of my level of frustration with the position and with so many factors that go into that. I got that email, oh yeah, we went to our son's exit interview kind of thing at school. And I remember checking my phone and seeing that email and showing it to her and she was like what, that is crazy timing. That you were so incredibly accurate with everything. Yeah. And then today I feel great. *Interview Participant G*

Introspection was initiated through varying avenues, but all has a similar thread of reflection of self in various situations. Participants described this as a way of reconciling where they were personally and professionally, thus allowing them to develop a sense of where they are currently and what their future may become.

**Negative**

*Negative (self-care)* was often attributed by the participants as being a product of training imposed by a more senior generation with their views of constant presence and not calling off for either physical or mental health. This instilled in one participant that for calling off for mental health was perceived as being "weak" of mind:

> I think I come from the generation, a sandwich generation, as far as medical education goes. I was trained by the giant who would round with an IV in their arm sick and, that is bullshit. I'm never going to do that. But that was sort of the expectation, and now I'm training a generation that thinks that is just mythology like that can't be real. That's not true. So, I feel like I'm there saying, Well, I mean, I remember working 110 hours a week. That was awful. And that was ridiculous and I learned nothing except these people are evil. And it's really funny I've learned what not to do, and now I'm slowly learning what to do and that truly is integration. I don't know if that really answers the question but integration of work and humanness, I think is what it takes. *Interview Participant C*

This participant further described how this was counter to what they are telling current residents, thus leaving them feeling hypocritical or fraudulent:

> It's really funny and so that presenteeism that I still hold on to feels. Oh my gosh, I feel like such a hypocrite sometimes. But, that's the culture, I am steeped in. I am doing my damnedest to make sure that I don't pass on that culture, but I feel a little fraudulent sometimes especially like last fall I was feeling very fraudulent. But you know what you just go with it, and you hope that it will get better in the future, and I think it will. *Interview Participant C*

One participant elaborated on the dichotomy of how physical illness is perceived and granted time away versus the perception of being mentally exhausted:

> If you're mentally exhausted, you get your butt out of bed and go to work. So, I don't know that I can call him and say, well, I'm just spent. It doesn't work like that. The work still waits for me whether I come in today, or I put it off till tomorrow. Then tomorrow there is twice as much work. So, those are decisions you have to make and obviously if you're going through a major depressive crisis that's a different scenario than if I'm tired because I stayed up too late and because I have struggles at home or whatever. I think if you have a family struggle and you truly can't concentrate and you're not taking safe care of patients that's a good time to have to sign yourself out and we have to say okay, I cannot do this today and find someone to cover, or in those kinds of major situations. *Interview Participant A*

Negative self-care was often experienced by participants as negative self-talk. A participant discussed staying in their position of PD despite negative feelings toward the job:

> What I have felt is like this is a bad job. It takes too much time, it doesn't pay enough, it's too draining. I have thought that before, but I haven't acted to actually get rid of it. *Interview Participant H*

However, various external factors also influenced the experiences of the participants. A participant described how not having a proper outlet to properly handle the COVID-19 pandemic will only further contribute to negative self-care and exacerbate issues within US healthcare:

> I think we need to do some serious work on like the PTSD that healthcare providers have from this past year I think many of us are just like brushing it under the rug and just trying to move on, but I think it's really messed us up a lot, and we were already kind of messed up to begin with US healthcare providers and the like, add this on so it'll be really interesting to see kind of what comes of that. *Interview Participant B*

Participants described how they are a product of their specific time-period of training, with all its negative self-care attributes, while also recognizing and deconstructing this paradigm was an idea some participants held. Others wouldn’t describe this paradigm as good or bad, but maintained they needed to be present for their professional duties. Table

4.4 provides a summary and overview of the major theme, *Coping*, with supporting subthemes.

**Table 4.4.**

**Title.** Summary of Major Theme *Coping*

| **Major Theme:** *Coping* | |
|---|---|
| **Subthemes** | **Sub-subthemes (supporting subthemes)** |
| **Feedback** | |
| **Cynical** | |
| **Self-Care** | Introspection |
| | Negative |
| | Positive |
| | Positive Framing |
| **Tax** | |
| **Emotional Intelligence** | |

**Job Demands-Resources Theory**

Mapping the subthemes to the framework of JD-R theory provided context and a depth of appreciation for the experiences of the participants. The four major themes from the inductive analysis will not be integrated into JD-R theory, as the categories of JD-R theory will assume the role of major themes (i.e., job demands, job resources, job crafting, self-undermining) with the subthemes supporting the JD-R theory constructs. JD-R theory identifies broadly job characteristics or working conditions fitting into one of two categories, either a job demand or a job resource. Job demands are "defined as those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological costs" (Demerouti et al., 2001 pg. 501). For this study, the subtheme *roles* fall into one or more characteristic as physical, psychological, social, or organizational aspect requiring output of energies (i.e., *administrator, advocate,*

*educator, clinician, "tax",* and *role conflict*). Additionally, job demands are further broken down into context determined hindrance or challenge demands (Bakker and Demerouti, 2017). Hindrance demands are defined as "job demands or work circumstances that involve excessive or undesirable constraints that interfere with or inhibit an individual's ability to achieve valued goals" (Cavanaugh et al., 2000 pg. 67). Whereas challenge demands are "defined as demands that cost effort but that potentially promote personal growth and achievement of the employee" (Bakker and Demerouti, 2017 pg. 278-9). Thus, a challenging demand in conjunction with adequate personal and job resources are demonstrated to promote work engagement (Bakker and Sanz-Vogel, 2013).

The other broad category, job resources, "refer to those physical, psychological, social, or organizational aspects of the job that are functional in achieving work goals, reduce job demands and the associated physiological and psychological costs, or stimulate personal growth, learning and development" (Demerouti et al., 2001 pg. 501). First, the subtheme *presence of community* encompassed the participants experienced support community through *relationships* provided at various moments either physical (*support team* assuming tasks and duties), psychological (*peers and colleagues* locally and nationally provide "sounding boards"), social (professional organizations as a "sustaining group"), and organizational aspects (*department chair and leadership* providing protected time, tangible support, and autonomy). Second, to "stimulate personal growth, learning and development" was experienced through the subthemes *feedback* (as participants received affirmation thus stimulating the personal growth of self-efficacy. Further, the subtheme *autonomy* was experienced as means to allow for the

freedom and time to pursue those tasks or initiatives the participants found to promote learning and development.

Further, as JD-R theory evolved personal resources were recognized and "refer to the beliefs people hold regarding how much control they have over their environment" (Bakker and Demerouti, 2017 pg. 275) or "positive self-evaluations" (Bakker et al., 2017 pg. 401). The participants experienced "positive self-evaluations" through *positive framing*. Through *positive framing* of their own situation, or at times their own well-being (i.e., burnout) participants were able to frame even negative well-being into a positive thus having hope for the future and therefore they evaluated themselves from a positive perspective. *Introspection* or active reflection enabled participants to become aware of the decisions they made in arriving at their current point of their career, thus having a belief that they have control of their environment. Although not explicitly a component of JD-R theory, a separate category or component is added for this study absence of resources. If the *presence of community* via *relationships* are viewed as a job resources, then when there was a *breakdown of community*, through *failure of communication, disconnected, lack of control and decision latitude,* and *unsupported* was experienced as an absence of resources.

The processes job demands and job resources initiate are "two fairly independent processes." One, being a health impairment process and two, a motivational process (Bakker et al., 2014). Therefore, job demands are "generally the most important predictors of such outcomes as exhaustion, psychosomatic health complaints, and repetitive stress injury" (Bakker et al., 2017 pg. 399, Hakanen at al., 2006). Whereas job resources are important predictors of "work enjoyment, motivation, and work

engagement" (Bakker et al., 2017 pg. 399, Bakker et al., 2007). Further, it has been demonstrated that job resources can buffer the health impairment process of job demands (Xanthopoulou et al., 2007). As such, with more available job resources, individuals can cope better with job demands.

Job-crafting is "defined as proactive changes employees make in their job demands and resources", which is based off the concept proposed by Wrzesniewski and Dutton (2001) of job crafting being comprised of task, relationship, and cognitive crafting (Bakker and Demerouti, 2017 pg. 276). For this study, the subthemes of *value, task significance, purpose, strength to career fit*, and *niche* were categorized as job crafting. Another aspect of adaptive self-regulation, along with job crafting, is recovery, which is the process of restoring the cognitive and energetic resources used up during work (Sonnentag, 2003). As such, through *positive self-care* such as meditation, therapy, journaling, or exercise, participants were able to manifest control of their personal environment and build more personal resources to confront further job demands. Conversely, self-undermining are "behavior[s] that create obstacles that may undermine performance" thus aligning with those experiences in the sub-theme *negative (self-care)* (Bakker and Costa, 2014 pg. 115). Furthermore, closely related and possibly associated with high job-demands in the setting of minimal resources was the current studies' participants experience of strain, specifically cynicism or cynical thoughts. (Bakker and Demerouit, 2017). In as much, the sub-theme *cynical* was experienced as viewing of events, situations, or their role through a cynical viewpoint which may create obstacles.

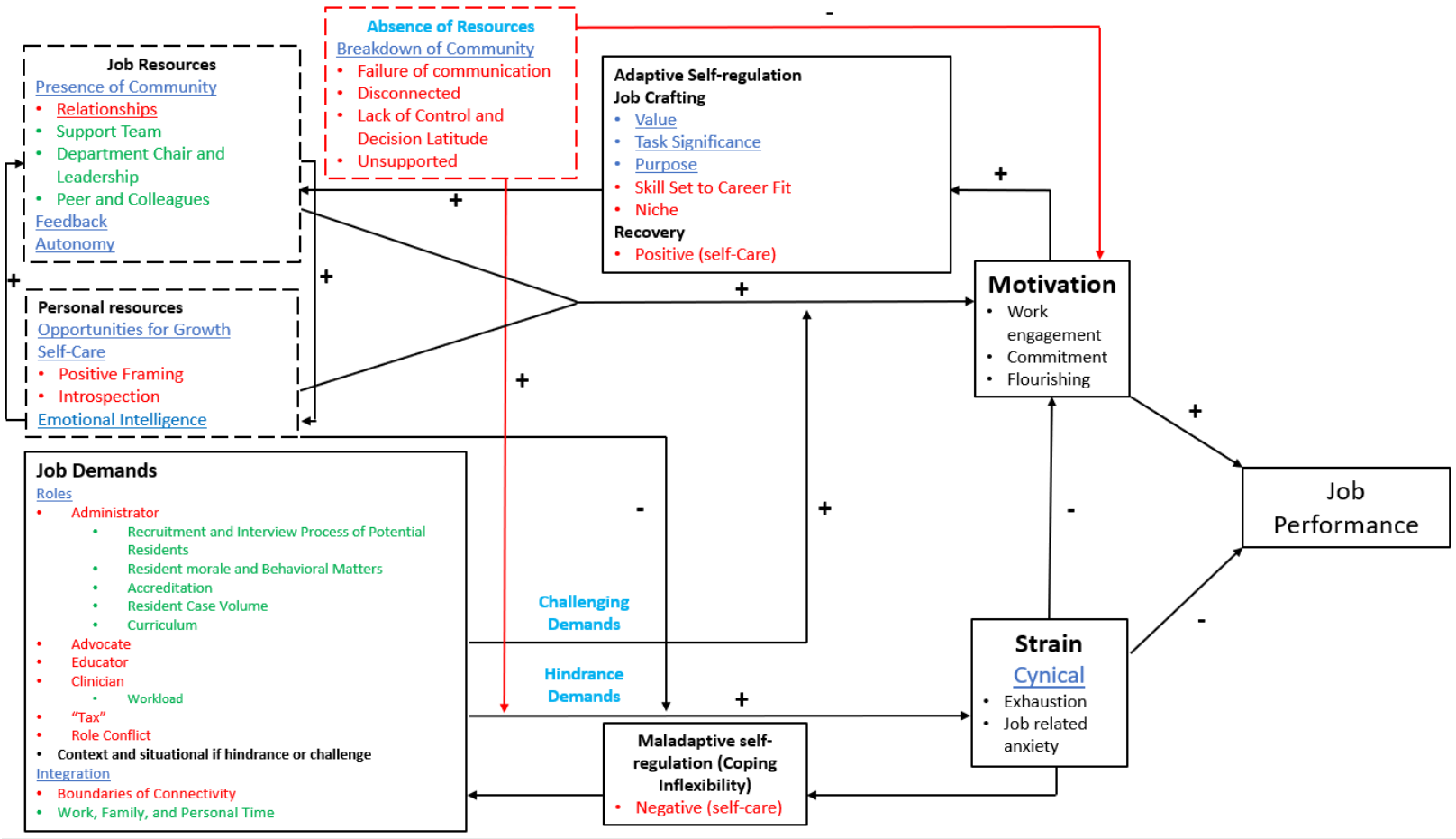
See Figure 4.8 for an adaptation of these definitions to the major themes and subthemes from Bakker and Demerouti (2017) and Bakker and de Vries (2021).

**Summary**

This study has no intention of describing, labeling, or categorizing the participants as meeting criteria for burnout or engagement, but to explore their holistic experience of the life as a PD or APD. Further, this study places the lived experience of the participant into the community and context they engage during their work lives. As such, this study had four research questions or aims, thus each are addressed in turn. First, how do PDs experience their residency program administrative tasks (i.e., faculty recruitment, required accreditation documentation, recruitment and selection of residents, evaluation and promotion of residents, etc.) in relation to their career well-being, fulfillment, and dedication? Through the major theme of *integration and the "hats" they wear* and the subtheme *roles*, and particularly *administrator* encompassed how the participants experienced these tasks. Specifically, the subtheme *accreditation* was the nexus of all other subthemes under the umbrella of role as administrator. In other words, the participants experienced *recruitment and interview process of potential residents*, *resident morale and behavioral matters*, *resident case volume*, and *curriculum*, all with an eye to how those influence, dictate, and inform accreditation. Further, administrative tasks are not experienced in a vacuum, nor do the participants confront them alone. Thus, *it takes a village*, specifically the subtheme *presence of community* was utilized by the participants to provide fulfillment, satisfaction, and significance. Whereas, when there was a *breakdown of community* participants experienced barriers to the administrative tasks. Second, how do PDs experience their clinical tasks, both in the role of providing patient care as an autonomous physician and training residents during patient encounters,

**Figure 4.8.**

Title. Mapping of Subthemes to JD-R theory framework (Black text denotes constructs from either Bakker and Demerouti (2017) or Bakker and de Vries (2021), all remaining colored text is in reference to levels of sub-themes from inductive thematic analysis)



in relation to their career well-being, fulfillment, and dedication? As with administrative tasks, the experience of participants in their clinical tasks, was through the major theme *integration and the "hats" they wear*, specifically through role as *clinician*. Participants experienced their role as clinician as providing both satisfaction and exhaustion. Further, role as *clinician* at times was experienced to be intimately entwined with participants role as *educator* (and mentor), and *advocate*. Specifically, when participants were on their clinical responsibilities with residents they sought out these opportunities to educate and thus providing meaning and fulfillment to their role as *clinician.*

Third, how do PDs experience their role(s) in an educator/scholarly activity (i.e. development and delivery of didactic sessions, one-on-one resident training in a clinical context, simulations, etc.) in relation to their well-being, fulfillment, and dedication? Not only did participants experience their role as an educator intimately associated with role as clinician, but in addition through the major theme *motivation and the meaning of their career*. Specifically, participants experienced through the subtheme *task significance* those moments of educating residents as the meaning and purpose of their position as PD or APD. Participants sought out those educational moments, and at times described be completely *absorbed in their task*. Further, *opportunities for growth* was the subtheme where participants experienced excitement and energy gained through curricular projects, DEI initiatives, research projects, and personal scholarly interest.

Lastly, how do PDs experience momentary emotional exhaustion, cynicism, professional efficacy, dedication, vigor, psychological affect their well-being, fulfillment, and dedication? Through the major theme *coping* participants described their experiences of self-care strategies, both positive and negative in managing the stresses and strains of

their profession. Further, through positive framing and introspection participants were able to reflect and provide positive frameworks to "cope" with demanding situations. The subtheme *"Tax"* encapsulated the participants experience with both emotional exhaustion and fulfillment, in doing what has to be done in order to engage in what they desire and find meaningful.

# Chapter 5: Discussion

This study presents the lived experiences of PDs and APDs in the context of their multifaceted work lives as they navigate integration of their multiple roles with their home, personal, and family lives. Appreciating the moments in time, areas of interest, and interactions with residents as experiences of exhaustion, stress, and strain in addition to experiences of significance, fulfillment, satisfaction, and motivation furthers the understanding of how they experience their responsibility as a PD and APD. Situating this study in the context of burnout research in physicians in general, and PDs specifically, allows for a starting point for the discussion of the prevalence of burnout. However, no study has explored how PDs and APDs experience their given responsibilities in terms of exhaustion, stress, or strain, and beyond this, no study has explored the experience of fulfillment, motivation, and dedication, or in other words: work engagement.

As such, this study was not concerned in reducing the participants' lived experience into a dichotomous criterium of burnout or engagement at a single time point, but was centered on exploring the experiences of exhaustion and fulfillment or aspects of their lived experience that may predispose and manifest as burnout and engagement on a unique spectrum. As the participants lived their day-to-day lives, they experienced moments of mental exhaustion and fulfillment, motivation and strain, community support and a lack of community, task significance and cynicism all of which allowed for a nuanced appreciation of their complex lives. In addition, this study explored how the participants' responsibilities integrated with their lives outside of their professional selves, and how they integrated their work-and home-lives.

## Discussion of Themes

### *Job Demands*

Job Demands-Resources (JD-R) theory is inspired by job design and job stress theories where the former largely ignored the role of job stressors or demands, and the latter ignored the motivating aspects of job resources. JD-R, however, sought to combine these ideas (Bakker and Demerouti, 2014). Briefly, three early and influential theories that informed JD-R are the job characteristics model (Hackman and Oldham, 1976), the demands-control model (Karasek, 1979), and the effort-reward imbalance model (Siegrist, 1996). Further, conservation of resources (COR) theory (Hobfoll, 1989, 2001) and self-determination theory (SDT) (Ryan and Deci, 2000) have been proposed theories underlying the mechanisms of JD-R theory. Specifically, job demands are those "physical, psychological, social, or organizational aspects of the job that require sustained physical and or psychological effort and are therefore associated with certain physiological and or psychological costs" (Demerouti et al., 2001 pg. 501). However, not all job demands are created or experienced as a unidimensional construct. Instead, job demands have been proposed to be further characterized as a hindrance or a challenge job demand (Bakker and Demerouti, 2017; McCauley et al., 1994; Podsakoff et al., 2007; Cavanaugh et al., 2000). Thus, hindrance job demands are those "that involve excessive or undesirable constraints that interfere with or hinder an individual's ability to achieve valued goals (demands that produce distress)" (Cavanaugh et al., 2000 pg. 67). Whereas a challenge job demand still comes at a cost but have the potential to promote personal development, growth, and achievement (Bakker and Demerouti, 2017; Podsakoff et al.,

2007). Further, the context of the work environment may in part shape how a job demand may be experienced as a hindrance in one context and a challenge in another.

This current study demonstrates how context provides a lens for how a given job demand was experienced as a hindrance or challenge. To illustrate, the *role as administrator* requires sustained psychological effort to navigate the psychological, social, and organizational aspects of the residency program, thus fitting the definition of a job demand (Bakker and Demerouti, 2017). Exploring a specific subtheme of role as *administrator, resident morale and behavioral matters* further places the subtheme into context for this specific job demand. First, it may be viewed as a challenge demand (i.e., promoting personal growth and achievement) if experienced to be rewarding and fulfilling to guide, mentor, and coach a resident confronted with struggles. For the effort expended in guiding and mentoring the resident, with the effort ultimately leading to a positive outcome, (i.e., the resident becomes successful in program) was viewed as rewarding and fulfilling, even if requiring mental effort. Conversely, this same job demand may become a hindrance job demand (i.e., circumstances that inhibit an individual's ability to achieve valued goals) when the behavioral matters are mentally exhausting with no positive resolution and consumed considerable psychological effort. This job demand can thus thwart the fulfillment of mentoring residents, as occurred when a resident had to be released from a residency program, causing considerable strain on one participant.

In the same context, specific appreciation of the subtheme of *role as clinician* allows for more nuanced understanding of this role which again required at times physical, psychological, social, and organizational aspects requiring effort. Viewed

through the lens of a challenge job demand (i.e., promoting achievement), participants described the patient-physician interaction as fulfilling and a source of satisfaction, especially when there was a congruence of expectations and an experienced mutual appreciation. Furthermore, if they navigated a challenging patient conversation well, such as delivering a poor prognosis, they find this to be a sense of fulfillment, not mentally exhausting. However, the role as a clinician was additionally described by participants as a source of mental exhaustion. Experienced from this viewpoint the participants discussed their experience of excessive inbox messages, managing the EMR, poor patient outcomes, and emotionally/psychologically draining patient encounters. A couple of extreme examples were the case of litigation of medical-legal issues as well as the emotional demanding patient encounter of reliving a death by suicide. Further, excessive workload was experienced as placing undesirable constraints on their goals to provide patient care, especially in the context of when hospital leadership viewed the patient encounter as purely a form of financial gain.

Furthermore, participants recognized hindrance job demands (i.e., excessive constraints that interfere with their valued goals) as those tasks or demands they must complete in order to pursue those job demands viewed as challenging demands, thus promoting achievement and personal growth (see Bakker and Demerouti, 2017). These hindrance demands were those tasks experienced as a “tax”, or “the ticket” as participants described to pursue those demands of their job they valued. Specifically, participants described their experience with administrative roles as not necessarily fulfilling or meaningful but necessary as part of the position of a PD or APD in which enabled them to remove barriers for residents to succeed. Another participant viewed their time as a

clinician as their admission ticket to allow them the opportunity to educate and subsequently mentor residents. Thus, being self-aware of the inherent hindrance job demands of a PD or APD may allow them to self-assess and to better allocate their mental and physical energies to tasks or roles they experience as promoting achievement and personal growth. This illustrates the rationale for job demands contributing to the health impairment process (i.e., cost effort and consuming energetic resources) if the job demands exceed the individual's adaptive capabilities or the resources which are available to the individual (Bakker et al., 2003).

Another source of job demands was inter-role conflict between professional time and personal time, manifested through the subthemes of *integration, boundaries of connectivity,* and *work family and personal time* where participants attempted to implement control, albeit not always successfully, over how they integrated their work and home lives. Elaborating on how participants experienced the emotional or psychological costs associated with these subthemes demonstrates how the participants attempted to control their environment, specifically the ubiquity of connectivity. In other words, their attempts to control their environment through boundaries, via their own and organizations' volition, was experienced as both at times attainable, while unsustainable at others. Exploring how the participants experienced the EMR demonstrates the Pandora's box of connectivity, where constant in-box messages have removed the element of control of their work environment, thus removing the ability to use the resources (i.e., support team) to be able to mitigate the hindrance demand of excessive workload. Rathert and colleagues (2019) explored experiences of frontline electronic health record (EHR) users (physicians and nurses) as an organization further

implemented the EHR for national compliance mandates. (For reference, technically EHR is usually regarding patient health information that may be transferred between institutions, where EMR is within the healthcare facility and not shared.) Themes from their study demonstrated participants experienced an increased workload and interference with relationships (Rathert et al., 2019). Furthermore, Rathert and colleagues (2019 pg. 28) applied COR theory in discussing how their participants "with more perceived resources will be more likely to follow EHR protocols… whereas those with fewer resources will be more likely to use workarounds." Rathert and colleagues (2019) findings further corroborates with the experiences from this current study's participants lacking support translating into an increased workload.

Exacerbating this lack of control with their environment was the demand on participants to model and educate residents on boundary setting where they, the participants, struggled to reconcile how to model the ubiquity of the EMR system. Wenger and colleagues (2017) conducted a time and motion study to determine how much time residents spent with patients and the computer. They found during an average 8-hour day shift, residents spent 21% of their time with patients, 65% of the time using a computer, and the remaining time doing both (Wenger et al., 2017). Thus, a majority of residents' time was spent interfacing with the computer, i.e., the EHR, which illustrates this current study's participants' concern for how to properly model a large aspect of becoming an autonomous physician. Thus, when participants described making the conscious decision not to have patients or others contact them outside of working hours, it enabled them to be intentional with their time as a restorative function, and how to appropriately model reducing constant connectivity for their residents.

### *Resources*

#### Job Resources

The other broad category of working conditions according to JD-R theory are "those physical psychological, social, or organizational aspects of the job that are functional in achieving work goals, reduce job demands and the associated physiological and psychological costs, or stimulate person growth, learning, and development," in other words, job resources (Bakker and Demerouti, 2017 pg. 274). In addition, job resources are, a) "functional in achieving work goals," b) "reduce job demands and the associated physiological and psychological costs," and c) "stimulate personal growth, learning, and development" (Bakker and Demerouti, 2007 pg. 312). Work characteristics which are categorized as job resources is where JD-R theory is consistent and aligns with conservation of resources (COR) theory (Hobfoll, 1989, 2001). As such, it is more salient to gain resources in the context of resource loss (i.e., if consumed or required); thus, resources gain their motivational potential when needed (Hobfoll et al., 2018). Further, COR theory predicts those with greater resources are less vulnerable to stress where those with less are more vulnerable (Salanova, et al., 2010). Hakanen and colleagues' (2005) study of Finnish dentists specifically explored how job resource influenced job demands. Their study demonstrated resources can diminish the negative influence of job demand on work engagement (Hakanen et al., 2005). Hakanen and colleagues (2005) further demonstrated, and were corroborated by COR theory, that dentists benefitted most from their job resources when job demands were high. This sets up the second process of JD-R theory, a motivational process, where the first process is set in motion by job demands (i.e., health impairment process). The proposed underlying mechanism is based on the

idea that job resources fulfill the basic psychological needs based on self-determination theory (SDT), with SDT being a "macro theory of human motivation" based on the research lineages of "intrinsic and extrinsic motivations" (Bakker and Demerouti, 2014; Deci et al., 2017, pg. 19).

Participants in this study experienced job resources through *presence of community*, specifically *relationships,* and the support they provided. Thus, through a social resource, community and relationships, participants were able to achieve work goals and reduce demands. The support team (i.e., colleagues, program coordinator, chief residents) which surrounded the participants were a job resource that reduced the job demand of excess workload, organizational tasks, and communication with colleagues. Further, the support team was experienced as a way for the participants to achieve what they valued most in their work. As such, the support team (i.e., colleague physicians) were drawn upon for their expert knowledge, and by providing options for specialty care referral. This enabled the current study's participants to engage in what they found fulfilling, that being education or providing care to a specific subset of patients. Relationships with the department chair and leadership, thus demonstrating tangible support, were an organizational resource that enabled the participants to be successful and achieve educational goals of their respective residency programs. Specifically, when a participant encountered resident behavioral issues (i.e., a hindrance job demand) and had the support of the department chair, and graduate medical education leadership they were better able to confront this specific job demand. This buffering effect is supported from a study by Bakker and colleagues (2007) exploring how job resources buffered the job demands of "pupil misbehavior." They found job resources (e.g., supervisor support,

innovativeness, appreciation, and organizational climate) were able to mitigate or "buffer" the negative effects of pupil misbehavior on the teacher's engagement. Engagement was not quantitatively measured as part of this current study, however, how the participants experienced the interaction of their job demands and resources were expressed through the positive outcomes from receiving support and relationships.

Relationships, specifically peer and colleague relationships, provided participants with support both locally (i.e., other PDs at the same institution) and nationally, through conferences and organizations. As a participant stated, the national group of PDs was a sustaining group and sounding board as all had a common bond built upon their identities as physician leaders of residency programs. Further, these relationships provided a source of belongingness, or relatedness. Furthermore, this one of the basic psychological needs along with autonomy and competence described by SDT (Deci and Ryan, 2000, Baumeister and Leary, 1995). Baumeister and Leary (1995, pg. 508) state: "research shows that people who do not have adequate supportive relationships experience greater stress than those who do. In part, this is because having other people available for support and assistance can enhance coping and provide a buffer against stress." Participants stated their community was fractured due to the COVID-19 pandemic, and thus, experienced feelings of losing sight of their meaning when they lost connection with a resident, further situating a loss of belongingness. It was unclear whether feelings of stress, anxiety, or depression resulted, but a sense of community, and by proxy, belongingness, was an aspect of their career the participants stated they sought and utilized.

Further, *feedback* and *autonomy* were experienced as job resources specifically as they relate to the stimulation of personal growth, learning, and development. Participants who experienced *autonomy* expressed being intrinsically motivated to perform tasks they found stimulating and promoted growth (e.g., curriculum projects, DEI initiatives, holistic resident interview protocols), whether through personal choice or asked by another individual with an empathetic rationale. Deci and colleagues (2017 pg. 20) state "When individuals understand the worth and purpose of their jobs, feel ownership and autonomy in carrying them out, and receive clear feedback and supports, they are likely to become more autonomously motivated and reliably perform better, learn better, and be better adjusted." Specifically, participants experienced worth and purpose by selecting curricular projects they found meaningful and were further given the support to complete. As participants acquired new skills through autonomy (e.g., DEI initiative projects, curricular design) they by extension acquired new resources (e.g., colleague support and feedback) that could be used in a time of need, when job demands are high (Bakker and Demerouti, 2017). This is further corroborated with COR theory, as initial resource gain begets future gain, thus setting in motion a "gain spiral" (Salanova et al., 2010; Hobfoll et al., 2018).

Feedback received from residents, leadership, and colleagues provided the participants feelings of validation, appreciation, and satisfaction. In other words, this was experienced as an affirmation of the participants' effectiveness, where the job resource of feedback was fulfilling the basic psychological need of competence, as proposed by SDT (Bakker and Demerouti, 2010; Van den Broeck, 2008). Van den Broeck and colleagues (2008) described in a study how the satisfaction of basic psychological needs led to less

exhaustion, which also informs the JD-R theory process that job resources are predictors of work enjoyment, motivation, and engagement. In other words, the subthemes of this present study, *feedback* and *autonomy*, viewed through the JD-R theory lens provide resources to beget further resources all the while having an impact of meeting the participants' basic psychological needs in the moment. For example, the autonomy to be able to work on DEI initiatives allowed a participant to engage in a meaningful task, which through feedback was understood to be well received, thus providing the psychological need of competence. Further, the job resources of performance feedback and autonomy have been demonstrated to mitigate the impact of job demands (Bakker et al., 2005).

Thus, participants' basic psychological needs were met through motivational processes in the subthemes of *feedback* (competence), *relationships* (relatedness or belongingness), and *autonomy*. As such, viewed as job resources, these experiences may provide areas for further research exploring interventions utilizing relationships, autonomy, and feedback, and their effects on engagement, commitment, and flourishing, thus perhaps leading to a net positive effect on job performance. Further, job resources as demonstrated by Xanthopoulou and colleagues (2007) in their study of home care professionals showed job resources could buffer the effects of job demands on burnout. Additionally, Bakker and colleagues (2005 pg. 177) demonstrated performance feedback (job resource) was able to buffer "the impact of work overload (job demand) on exhaustion." In other words, not only may job resources promote the motivational process leading to engagement but those who have many available job resources may be

able to better cope with their job demands, thus buffering their effects on exhaustion (Bakker and Demerouti, 2017).

**Personal Resources**

Personal resources are "the beliefs people hold regarding how much control they have over their environment" (Bakker and Demerouti, 2017 pg. 275). A further definition of personal resources adds the aspect of "positive self-evaluations that are linked to resiliency," and thus personal resources have been demonstrated to be positively related to work engagement when challenge demands are high (Bakker and Sanz-Vergel, 2013 pg. 401). Bakker and Sanz-Vergel (2013) additionally demonstrated when hindrance demands are present, their studies' participants were unable to utilize personal resources, thereby becoming incapable of weekly flourishing (e.g., being able to develop positive relationships with others, as well as their willingness to grow to their full potential as a person). Aspects of "positive self-evaluation" in this current study were addressed with subthemes *positive framing, introspection,* and *emotional intelligence.* With regard to the belief of self-control over the environment as a personal resource, the subtheme *opportunities for growth* was explored.

*Positive framing,* as a source of positive self-evaluation, was captured when participants viewed their career through an optimistic lens and further viewed moments of self-identified burnout through a positive frame. Having optimism as a personal resource is congruent with research conducted by Bakker and Sanz-Vergel (2013) where optimism as a personal resource interacted with emotional demands (challenge demand) in predicting work engagement. Thus, for this present study as participants encountered challenge demands (i.e., challenging patient encounters, research projects, administrative

tasks), they often framed it in a positive context which allowed them to find the satisfaction in their career as an adventure. Extrapolating beyond the interaction of positive framing and hindrance job demands to the mitigation of burnout would be conjecture. However, future research in this area could explore how PDs experience the interaction of personal resources and job demands.

*Emotional intelligence* was viewed as personal resource that enabled participants to utilize this resource to encounter emotional demands of challenging patient interactions, such as delivering a life altering diagnosis (i.e., cancer, death of loved one, pregnancy loss, poor outcome). Using emotional intelligence skills of empathy and silence during these moments allowed the participants to provide space for themselves as well as the patient to process the information. Furthermore, emotional intelligence enabled participants to be mindful and aware of how residents experienced challenges, power dynamics, and hierarchy. Thus, the demand of resident education viewed through an empathetic lens allowed for regulation of those moments of frustration. Bakker and De Vries (2021 pg. 13) propose individuals with high emotional intelligence (i.e., ability of a person to understand their own emotions and those of others) will be able to "recognize their own job strain and fatigue and consequently be able to regulate their strain." Corroborating these findings in a healthcare context, Neumann and colleagues (2007) demonstrated physician empathy prevented depression and improved quality of life in oncology patients. Further, the same study found physician stress negatively influenced those relationships. In addition, Pearlman and colleagues (1995) demonstrated exposure to patients' negative emotions may elicit healthcare provider stress. As such, healthcare providers need to adequately manage and be aware of their own and others' emotions and

a way this may be possible is via emotional intelligence (Le et al., 2018; Pekaar et al., 2018a). In a healthcare context, Pekaar and colleagues (2018b) demonstrated emotional intelligence has a negative influence on perceived stress. Thus, in this present study using emotional intelligence may moderate the link between job-strain and maladaptive self-regulation (coping inflexibility and self-undermining; Bakker and De Vries 2021), as participants were able to mitigate the challenging and at times negative encounters with patients or residents.

*Introspection* was a way of self-evaluation, at times being cathartic as demonstrated via the participant writing a letter of resignation to express their negative feelings, but ultimately not resigning from the position. One positive outcome stated by a participant as a result of the interview process was that it allowed them to evaluate their career and reflect upon what was and was not going well. In addition, participants were able to self-reflect on how their tenure as a PD or APD was progressing and if it was an appropriate time to develop a succession plan. Introspection can also be viewed as specific type of emotional intelligence, as participants in this study were demonstrating "self-focused emotional appraisal," a component of the emotional intelligence scale validated by Pekaar and colleagues (2018).

*Opportunities for growth* include the freedom, or control, afforded through autonomy (job resource influencing a personal resource) that enabled participants to experience and bring to fruition projects and pursue areas of interest to influence their environment. Having the control to select and partake in these various opportunities for growth afforded participants time to engage in those tasks they found impactful, meaningful, and fulfilling. This further allowed them to have a sense of self-efficacy as

participants often selected to work on a project which felt efficacious from prior experience. This aligns with Xanthopoulou and colleagues' (2013 pg. 82) concept "that self-efficacy is particularly useful for engagement, when management of emotions is strongly required."

The above subthemes demonstrate how the participants experienced their coping mechanisms or personal resources and how these enabled them to control and positively evaluate their situation. Bakker and Demerouti, (2017 pg. 275) state: "personal resources are expected to buffer the undesirable impact on job demands on strain and boost the desirable impacts of (challenge) job demands on motivation." Specifically, positive framing, emotional intelligence, and introspection may have mitigated the undesirable impact of job demands (i.e., clinician-related emotional demands, educating residents) and opportunities for growth boosted the desirable challenge demands (curriculum development, interview process) to be motivating and engaging.

**Absence of Resources**

Two underlying processes of JD-R theory, the motivational and health impairment processes, are initiated by job and personal resources and job demands, respectively. Thus, these conceptualized processes of JD-R theory illustrate the need for available job and personal resources to not only be a source of motivation (leading to engagement), but also to buffer the effect of job demands. Bakker and colleagues state: "job demands evoke a stress process, because they lead to energy depletion, whereas a *lack of job resources* [emphasis added] evokes a withdrawal process, because it undermines employee motivation and learning" (2005 pg. 176). Further, Bakker and colleagues (2005 pg. 177) demonstrated "in the majority of cases, employees reported the

highest levels of fatigue and demoralization when high job demands coincided with *low job resources* [emphasis added]." Specifically, the job resources included in Bakker and colleagues (2005) study were autonomy (i.e., decision authority), social support (e.g., asking colleagues for help), quality of the relationship with the supervisor (e.g., a supervisor using his or her influence to help the employee solve problems at work), and performance feedback (e.g., receiving sufficient information about work goals).

For this present study, through their experiences of *breakdown of community* and within the subthemes of *lack of control and decision latitude*, *failure of communication*, *disconnected*, and *unsupported* captured the essence of how they experienced an absence of resources. As mentioned previously, the *breakdown of community* was experienced as a fracturing of the community of clinician educators, thus reducing feelings of belongingness or relatedness (Baumeister and Leary, 1995; Ryan and Deci, 2000). Ryan and Deci (2000 pg. 74-75) state "the basic needs for competence, autonomy, and relatedness must be satisfied across the life span for an individual to experience an ongoing sense of integrity and well-being…," and they continue, "for example, a social environment that affords competence but fails to nurture relatedness is expected to result in an impoverishment of well-being." Baumeister and Leary (1995 pg. 508) elaborate that "people who do not have adequate supportive relationships experience greater stress than those who do." Maslach and Leiter (2016) in their model of burnout, describe six areas of work-life (job characteristics) that put individuals at risk of burnout, with one of the six being community. They state: "Community has to do with the ongoing relationships that employees have with other people on the job. When these relationships are characterized by a lack of support and trust, and by unresolved conflict, then there is a greater risk of

burnout" (Maslach and Leiter, 2016 pg. 355). Thus, the experiences of frustration, being undervalued, dissatisfied, or moments experienced as being "tough to handle," may be in part due to the lack of support from the academic community. In part, this breakdown of community was due to the circumstances surrounding the COVID-19 pandemic, however even prior to the pandemic, a participant stated scheduling times to connect was challenging due individuals' many obligations. Galanti and colleagues (2021) using JD-R theory as their framework explored how job demands of family-work conflict, social isolation, distracting environments, and job resources of job autonomy, and self-leadership impacted productivity, stress, and work engagement when working from home (WFH) during the COVID-19 pandemic. They found that family-work conflict and social isolation were negatively related to WFH stress, productivity, and engagement, whereas self-leadership and job autonomy were positively related to WFH productivity and WFH engagement. However, job autonomy and self-leadership had no effect on WFH stress. Looking toward the future, with many people continuing to work remotely with occasional in-person times, it stands to question how the sense of belongingness and community will adapt.

*Lack of control and decision latitude* manifested as participants experienced a lack of authority in decisions affecting the larger Academic Medical Center (AMC) community, and feelings of only being able to affect change at the level of their immediate residency program. Further, addressing larger healthcare issues affecting society at large, their agency to affect change was also limited, and many found this to be overwhelming and challenging to initiate change through multiple levels of bureaucracy. A specific challenge was addressing targeted, marginalized, and historically oppressed

communities and populations. Thus, this lack of agency to affect change may decrease the motivation to initiate change or result in experiences of demoralization and isolation from the community by lack of representation and voice. Pololi and colleagues (2012) explored why academic medicine faculty feel dissatisfied with the intent to leave the institution and found unrelatedness, expressed as feelings of isolation and being invisible correlated with intent to leave. Further, they concluded their findings were supported by the SDT theory, where "social environments characterized by lack of connectedness and low self-efficacy hinder intrinsic motivation and thwart individual innate psychological needs" (Pololi et al., 2012 pg. 865). Thus, participants of this current study may feel a lack of connectedness and self-efficacy in making change to the larger organization and to the broader community they serve.

*Failure of communication* related to a resource provided by Bakker and colleagues (2005 pg. 173): "quality of the relationship with the supervisor," where the supervisor in this context was viewed as an authority (ACGME) with whom the participants had to work in concert in order to administer their respective residency programs. Further, this authority may be called upon to assist in times of problems, issues, or situations, as encountered with the COVID-19 pandemic. However, the *lack of communication* between the ACGME and participants inhibited them from coming to any formal conclusion on how to solve the problem of procedure restrictions that affected case volumes (i.e., minimum case logs) and survey results during COVID-19. This led to frustrations and ambiguity of how to conduct their administrative tasks, thus removing the ACGME as a resource to be called upon to solve or alleviate this problem. In its

place, the participants experienced this as a frustration, and even demoralization, as they didn't know the ACGME expectations or how their requirements may evolve.

According to the belongingness hypothesis by Baumeister and Leary (1995 pg. 497), there is a need for "frequent, non-aversive interactions within an ongoing relational bond…to form social attachments readily under most conditions and resist dissolution of existing bonds." Further, "people invest a great deal of time and effort in fostering supportive relationships with others. External threat seems to increase the tendency to form strong bonds" (Baumeister and Leary, 1995 pg. 502). This reluctance to break social bonds for participants was exacerbated by the COVID-19 pandemic, where isolation, loss of in-person, personal contact negated persistent interaction, while at the same time COVID-19 was an external threat with quarantines and restrictions preventing at times the formation of strong bonds. The subtheme *disconnected* described where participants experienced the threat of dissolution of their community of educators via the COVID-19 restrictions, with the loss of camaraderie and check-ins viewed as a challenge for participants. Further, as participants were isolated from residents (source of belongingness) to attend to roles such as administrative tasks, they experienced a loss of meaning and sight of their mission. It may be argued using virtual platforms for connectivity should substitute the need to belong and maintain social bonds, however participants experienced "no sense of personal connection" when engaging others in a virtual setting. Thus, the virtual platforms further disconnected participants from their community, and thwarted their sense of belongingness, negating social support as a job resource. Wildman and colleagues (2021) found similar experiences in undergraduate college students as members of long-term project teams (sixteen or more weeks) as these

teams moved to a virtual environment during COVID-19 in-person restrictions. They found through thematic analysis there were challenges to effective teamwork that included the influence of outside influences, challenges in communication, increased ambiguity, and morale loss (Wildman et al., 2021; Herriott and McNulty, 2022). As such, assuming a virtual environment can be used as a surrogate for in-person communication may be folly.

*Unsupported* was experienced as a breakdown in the support and trust of the leadership, thus impacting the resource of the "quality of the relationship with the supervisor" (Bakker et al., 2005 pg. 173). Specifically, a participant discussed how leadership of the hospital system was unwilling (or unable) to make concerted change in how a service (IT and clinical support persons) was provided, thus being unable to use their "influence to help the employee solve problems at work" (Bakker et al., 2005 pg. 173). Further, *unsupported* manifested as an experienced inability to turn to support staff as a resource to accomplish tasks which led to limited financial support from the department. As stated by Bakker and colleagues (2005, pg. 177) "employees reported highest levels of fatigue and demoralization when job demands coincided with low job resources." Thus, experiences of being unsupported, limited the resource of leadership to assist in solving problems or addressing task, and further depleted the pool of available resources for participants. Other studies have found a lower sense of institutional commitment to improve support for faculty as an underlying reason for intent to leave academic medicine (Pololi et al., 2012).

### Implication of Job Resources and Personal Resources

In developing interventions to mitigate burnout and promote engagement, there has been focus in an either/or model, either at the individual or the organization, or it has been described as "bottom-up" or "top-down" interventions, respectively (Bakker and de Vries, 2021). Specifically, West and colleagues (2016) performed a meta-analysis on burnout interventions on physicians and found both individual and organizational interventions to be beneficial. However, no studies looked at using both types of interventions simultaneously or in series. Further, Panagioti and colleagues (2017) found in a meta-analysis that organization-directed interventions were more likely to reduce burnout than physician directed interventions. Organizational-directed interventions were defined as addressing "structural changes, fostering communication between members of the health care team, and cultivating a sense of teamwork and job control tended to be the most effective in reducing burnout." Unfortunately, interventions of this type were rare and not widely evaluated and most interventions at the organizational level "were simple reductions in workload and schedule changes" (Panagioti et al., 2017 pg. 203). With participants in this current study, experiencing effective communication, *relationships*, *support team* (i.e., job resources), many of those requirements set forth by Panagioti and colleagues (2017) as well as the organizational interventions deemed effective by West and colleagues (2016) to reduce burnout were met. These results therefore support a need to develop more organizational specific programs to address burnout and engagement, with an appreciation for how the organization-specific persons experience their job and personal resources.

Bakker and de Vries (2021) expand upon what they view as the underlying reason as to why the above meta-analyses indicate reduction in burnout, albeit often with small effect sizes stating: “many interventions do not consider the *structural* [emphasis in original] causes of burnout in the work environment: high job demands and low job resources” (pg. 5). As such, they argue “stronger focus on specific job demands and resources responsible for burnout in organizational as well as individual interventions may result in stronger effects” (pg. 5). Appreciating the participants experience of how they view their job demands and the context in which they occur may give both the individual (PD and APD) and the organization (AMC) a more nuanced appreciation for both hindrance and challenge job demands. When considering the hindrance demands on physicians with excessive workload, EMR, and emotionally demanding patient interactions, there may never be a situation where one can completely remove all causes of strain, but providing resources such as colleague support, communication with leadership, quality feedback, as well as allowing for autonomy to provide initiative to take on opportunities for professional growth may help to mitigate the effects of those job demands.

Bakker and de Vries (2021 pg. 5) state another underlying reason which may be contributing to the relatively weak effects of burnout interventions is that “all employees are treated the same.” They go on to state that the individual may be exposed to different levels of job demands and resources, and thereby uniquely experience job strain and/or burnout, utilize job crafting and recovery (discussed more in the subsequent section) differently, and differ in emotional intelligence and personality type. This was typified with the participants in the present study where all were PDs or APD, but no two had the

same clinical responsibilities, amount of support, reporting structure to leadership, level of autonomy, and therefore broad, general, impersonal organization interventions (e.g., job training/education, leadership training, or modifications to work processes) may have no specific effect across individuals. Nor would non-specific or general individual-focused interventions (e.g., mindfulness, stress management, cognitive-behavioral techniques, or relaxation) be equally beneficial across all participants as they utilized their own types of recovery specific to their needs and personal experiences. Thus, supported by the uniqueness, context specific, and appreciation for all experiences of participants, the most "effective interventions combine organizational and individual approaches, and consider time as well as *differences between individual* [emphasis added] employees" (Bakker and de Vries, 2021).

### *Job Demands and Job Resources Interactions*

"Because employees never experience work overload isolated without having some kind of support or interaction… it is prudent to examine combinations of work characteristics when explaining the experience of job stress" (Bakker et al., 2005 pg. 178). A third proposition of JD-R theory is an interaction between job demands and resources on the overall well-being of the individual (Bakker and Demerouti, 2014). The first interaction is that job resources buffer the impact of job demands. Bakker and colleagues (2005) demonstrated job resources such as social support, autonomy, performance feedback, and opportunities for development mitigated job demands such as work overload, emotional demands, and work-home interference on the outcome of exhaustion. A second interaction is an amplification process where job demands impact the job resources on motivation. In other words, job resources become "salient and have

the strongest positive impact on work engagement [motivational process] when job demands are high" (Bakker and Demerouti, 2014 pg. 11).

For this current study, the PDs and APDs' experienced multiple interrelated roles with associated tasks (i.e., job demands) embedded in a community of support (resources), and when present were able to mitigate those job demands. Specifically, when taking on the role of *administrator* and addressing the tasks of *recruitment and interview process of potential residents*, the job resources of *relationships* mitigated work overload the task of interviewing and recruitment may have induce. Further, participants described their working relationship with program coordinators in scheduling interviews, assigning faculty for interview days, and contributing with the initial screening process, thus mitigating in part the demands of the interview process. One participant acknowledged their program coordinator was arguably one of the most able and competent, enabling the participant to empower the program coordinator to take on tasks to lessen their own workload. The opposite was experienced by participants as well, where one participant had a newly hired program coordinator, coincidently occurring just prior to resident interviews. As such, the participant personally took on the task of organizing interviews and other related matters and stated they never wanted to be *that* involved again, because of the time and energy involved. Thus, one case illustrating the experience of a job resource (i.e., relationships) buffering or mitigating a job demand (i.e., interview process), and the other an experience of an absence of a job resource, with a loss of this buffering effect.

For the second interaction process, this was best demonstrated with the job demands encompassed in the *role as clinician*. As previously discussed, this job demand,

depending on the context, was experienced as a hindrance or challenge job demand. This second interaction, between job demands and resources, can be explored through the context of a challenge demand, where being a clinician was cognitively demanding, but additionally motivating, and a source of achievement and satisfaction. Amplifying this motivational process are the job resources such as *relationships* with *peer and colleagues*, and *autonomy*, where peers and colleagues enabled participants to partake in clinical responsibilities associated with their perceived strengths (i.e., educating residents in the clinical setting, or engaging in a particular patient population), thereby allowing the clinician role to be satisfying and motivating. This is corroborated by Karasek (1979) who describes a job which combines high demands with high resources as an active job, thus motivating for employees to develop knowledge and develop new behaviors. Further, personal resources of the participants, such as *opportunities for growth*, was expressed as a growth mindset by viewing challenging patient diagnoses or an unfamiliar treatment option, as an opportunity to learn and grow, rather than a negative, mentally exhausting task. This motivational process is further supported by COR theory which states that resources acquire their motivating potential and become useful when needed where individuals may invest in resources in order to protect against loss (Hobfoll, 2018). Thus, as a challenge demand arose, the participants utilized a personal resource (i.e., self-efficacy, growth opportunity) thereby having a motivating, and satisfying experience. The process of buffering and motivating processes was discussed in a study by Bakker and colleagues (2007) where they found when teachers were faced with high job demands (e.g., pupil misbehavior, unfavorable physical working environment), job resources were most predictive of work engagement in those settings. They further found

in the same study that pupil misbehavior was not detrimental to work engagement when teachers received "support and appreciation from their supervisor and colleagues," thus demonstrating the buffering effect of job resources on job demands (pg. 280).

Specifically, for PDs and APDs, removing or mitigating all job demands which may lead to strain and ultimately burnout is not obtainable nor feasible. However, recognizing what PDs and APDs individually experience as job demands along with an appreciation of their experience with job and personal resources, may allow for a collaborative effort between the PD and APD with their department or institutional leadership. This partnership may enable both to develop potential avenues to gain resources to buffer job demands or even potentially amplify challenge demands with appropriate resources. Fassiotto and colleagues (2018) described a pilot program to ultimately mitigate burnout which was customized to each faculty's goals and used coaching, work support (e.g., writing/editing, lab management), home support (e.g., meals, errands, housecleaning) to allow faculty to adjust their time allocation to meet workload of teaching/mentoring, research, clinical, and service/administrative time. Although, not grounded in JD-R theory, Fassiotto and colleagues (2018), provided resources for faculty to meet job demands and found an increase in satisfaction and a decrease in postponing or avoiding vacation and health habits (Fassiotto et al., 2018). Although, they did not measure how this intervention mitigated stress and burnout, it nonetheless demonstrates the effectiveness of developing an individual based approach in providing job resources to meet job demands.

### *Job Crafting and Recovery*

Job crafting, as conceptualized by Wrzesniewski and Dutton (2001 pg. 179), involves a dual process addressing the "task boundaries of the job" and "the relational boundaries of the job," with both actions not mutually exclusive. For example, changing task boundaries is the action of altering the number tasks or if the task is embedded in a system while performing the job; whereas changing cognitive task boundaries alters how one views the job as a set of discrete tasks or parts or as an integrated holistic whole (Wrzesniewski and Dutton, 2001). Wrzesniewski and Dutton (2001) further describe what motivates an individual to become a job crafter as the: 1) need for control over job and work meaning; 2) need for positive self-image; and 3) need for human connection with others. As such, job crafting within the context of JD-R theory is viewed as proactive employee driven action that may increase job resources and challenge demands while simultaneously decreasing hindrance demands (Bakker and Demerouti, 2017).

By taking control of their job, even in typically low autonomy jobs, an employee may allow the job crafter to "make the job their own" (Wrzesniewski and Dutton, 2001 pg. 181). Importantly, having little control over one's work leads to alienation which "signals a lack of control, a certain powerlessness felt by the individual and is derived from the structure of social relations" (Rogers, 1995 pg. 142). Roger (1995 pg. 142). This continues the conceptualization of alienation as "the lack of power to direct one's work, to maintain satisfactory work relationships, and to create a self-definition rather than have it imposed." Thus, the need to have control and agency underlies the motivation to engage in job crafting as to not be alienated from work, others, and self (Rogers, 1995). Through assigning *task significance* on certain days, participants of the present study

were able to proactively control the tasks in which they engaged, and specifically engage in those roles they found meaningful. As clinician-educators, the participants described inserting educational moments into their clinical responsibilities or having whole weeks of mentoring and being immersed in the learning environment with residents. This enabled the participants to alter or shift the meaning of their work life and have control of their day-to-day tasks or job demands. Similar findings were found in a study of hospital "cleaners" where they looked at their job not as a discrete task of cleaning rooms but as an integrated part of the whole healthcare team, thus viewing the meaning of their job to be helpers of the sick (Wrzesniewski and Dutton, 2001). Thus, participants (PDs and APD) in this study changed the meaning of their work by integrating their roles, especially those as an educator and clinician, for example by inserting educational moments throughout their clinical responsibilities, to establish or craft a meaningful career.

Job crafting has been further described by Berg and colleagues (2010 pg. 166) where their participants were able to utilize task crafting via "altering the scope or nature of their task." Similarly, in this study participants were able to alter the scope of their tasks, through the subtheme *niche.* Participants were able to use this form of job crafting by being cognizant of those aspects of their work life that they found to be most interesting, such as appreciating their affinity for the environment of academic medicine and crafting a career as a PD or APD in the setting of an AMC. Another example was a participant who desired a career founded on multiple pillars (i.e., education, research, patient care) and thus assumed the role of PD, a position with multiple inter-connected responsibilities in order to craft their career. In addition, the subtheme *value* (e.g., how

the participants' value system aligned with the healthcare system at large) allowed the participants to engage in the task they found to be meaningful and impactful, such as education, motivation, diagnosing, and treating patients. Moreover, participants were aware of what they did not want to participate in, such as insurance formularies. Importantly, when *values* did not align, participants experienced alienation from colleagues such as value incongruence of one's own financial gain over serving the patient, and the organization valuing profits over providing optimal patient care. Thus, participants made a "trade-off between work they want to do and work they have to do" (Maslach and Leiter, 2016, pg. 355).

Berg and colleagues (2010 pg. 167) demonstrated in their study, "cognitive crafting" took on the form of "redefining perception of the type or nature of tasks or relationships involved in one's job" and "reframing perception of job as a meaningful whole that positively impacts others rather than a collection of separate tasks." Addressing the former, participants described their experience through the subtheme of *skill set to career fit*, where working with a specific patient population they want to serve (e.g., historically underserved or marginalized communities) allowed the them to redefine their relationship with their job (Berg et al., 2010). Regarding the reframing perception of the job as meaningful, participants experienced their role as a mission or an overarching *purpose* (Berg et al., 2010). Particularly, participants saw their position as a mission ("mission to create a path") or as an educator ("all in one a teacher can be"). In both of instances, the participants saw their position as an integrated whole, not a collection of disparate tasks. Comparatively, when participants experienced or had to partake in a

separate task (i.e., administrative) they stated losing sight of their overall mission (i.e., educating).

A second self-regulation strategy, in addition to job-crafting, is recovery. Recovery may be used to restore cognitive and energetic resources through psychological detachment, relaxation, mastery experience, and control during leisure time. Participants in this study discussed their methods of relaxation (i.e., "a state of low activation and increased positive affect"; Sonnentag and Fritz, 2007 pg. 206). through the subtheme of *positive self-care* which included meditation, therapy, and attending to their spiritual needs. Further, participants described control during leisure time through carving out time for physical activity and learning to add in wellness throughout the day. Ten Brummelhuis and Bakker (2012 pg. 452) demonstrated optimal recovery the preceding day led to additional personal resources, thus where "employees who engaged in social, low-effort, and physical activities after work felt more vigorous in the morning." The opposite effects were demonstrated where employees who did not psychologically detach from work related off-job task activities the day before were less vigorous and reported less work engagement the following day (Ten Brummelhuis and Bakker, 2012). Participants in this study described not being able to turn off, answering emails and texts on vacation, and doing work-related tasks in the evening but claimed it does not have a detrimental effect.

This feeling of constant connectivity may demonstrate what Mazmanian and colleagues (2013) describe as the autonomy paradox. The authors conclude that professionals' constant connectivity promoted "individual performance as well as that of their teams and organizations" (pg.1351). However, in doing so, those participants in turn

limited their own autonomy overtime, thus invoking the autonomy paradox. Furthermore, Buchler and colleagues (2020) demonstrated constant connectivity had a negative relationship with participants well-being through the lack of psychological detachment ("switching off") from work. In this current study, one participant described that in taking on an administrative position (such as a PD or APD), there is an assumption of being always available. This underlying societal and institutional expectation of ubiquitous availability may be counter-productive in negating the positive benefits of detaching from work and recovery. Thus, participants may experience the autonomy paradox of flexibility of communication, but at the same time limiting the personal autonomy when physically away from the place of work. However, further exploration of how boundaries of connectivity influence recovery would merit additional research.

### Implications of Job Crafting and Recovery

Job crafting is a proactive process, associated with adaptive action, where Berg and colleagues (2010 pg. 159) demonstrated proactivity as "efforts to initiate or create change (proactivity) can shape and be shaped by responses to perceived challenges to making such change (adaptivity)." In other words, if an individual wants to proactively add a task or component to their job, but they meet resistance from leadership with implementation or adoption of change, this motivates them to modify and adapt to their leaderships' trust to overcome the leaderships' hesitance to making change. For this study, participants wanted to add aspects to their day-to-day tasks (i.e., educational opportunities, patient populations to serve) and thus they adapted their work environment through *niche, purpose, skill set to career fit*, and *value*. This allowed them to create more job resources (i.e., relationships, autonomy, feedback, opportunities for growth),

while decreasing hindrance demands (i.e., clinical duties, "tax") and increasing challenge demands (i.e., educator, mentor). In line with JD-R theory this potentially could influence job strain (i.e., decrease exhaustion and in turn burnout) and motivation (i.e., engagement and meaning).

Job-crafting is an individual-level intervention, usually initiated by the employee. However, organizations (e.g., AMC leadership) may stimulate "job crafting behavior that is beneficial for both the employees and the organizations by showing individuals how they can craft their job" (Bakker and Demerouti, 2014 pg. 19). Gordon and colleagues (2018) explored the outcomes of performing a job crafting intervention on "medical specialists" and nursing participants. The intervention in their study included three-hour workshops where participants were informed and trained on job crafting strategies to include seeking challenges and resources and reducing job demands in addition to sharing learning narratives (Gordon et al., 2018). This latter part of the intervention was based on nursing theory in practice and was incorporated to help "stimulate participants' actualization and understanding of how their work behaviors can be viewed as a form of job crafting" (Gordon et al., 2018 pg. 102). The intervention concluded with participants constructing a "personal crafting plan" which was used by the participants to implement specific crafting actions over a three-week period (Gordon et al., 2018 pg. 102). This study demonstrated a net positive effect in self-motivated behaviors, well-being, and performance via job redesign facilitated by job crafting (Gordon et al., 2018). Future studies could explore a job crafting intervention for PD or APD that promotes reflection on their proactive abilities to inform the development of a job crafting plan and experimental reflection to promote well-being. An approach comparable to Gordon and

colleagues (2018) intervention, could be utilized to "offer individuals more job control and utilize their knowledge as the experts" via emphasizing reflections and the influence of both management and participants (Gordon et al., 2018 pg. 98). Thus, participants "may either craft their daily work environment and mobilize their job resources or run into trouble because of their high level of exhaustion" (Bakker and Costa, 2014 pg. 117).

Regarding recovery, Sonnentag (2012 pg. 114) states: "being continuously occupied with job related issues without mentally disengaging from time to time might seem necessary for employees in many organizations, but it can have negative side effects." It has been demonstrated that individuals who are given more work or tasks than they can complete in a work day will detach less from work when they are at home (Sonnentag, 2012). Likewise, recovery during time away from work is positively related to next-day work engagement (Ten Brummelhuis and Bakker, 2012). Thus, for the PDs and APDs who have careers with multiple integrated roles and responsibilities which often seep into the evening and during home hours, it is important for both the larger AMC and the individual PD or APD to establish expectations. First, a PD or APD must be cognizant to set aside time and make it a priority to engage in psychological detachment "by having clear physical and mental boundaries between work and nonwork life" (Sonnentag, 2012 pg. 117). Such as not answering emails after hours, not completing EMR charts once leaving the clinic, and if away ensure adequate coverage for roles and tasks.

In a meta-analysis by Wendsche and Lohmann-Haislah (2017), detachment was found to positively relate to employees' health, well-being, and performance with a recommendation for both organizational-level benefits (e.g., adequate staffing,

organizational practices to manage conflicts, expectation congruence) as well as person-centered interventions (e.g., stress management programs, trainings for competence and skill enhancement). However, for this to be actualized, the organization needs to *clearly* communicate and support with *actions* PDs and APDs (and all members of the institution) that they are encouraged to switch off from work while at home. Further, as Sonnentag (2012 pg. 117) suggests, organizational "policies should explicitly spell out that 24/7 employee availability is not necessarily what defines a committed and highly performing workforce." Understandably, this addresses an underlying societal "norm" or expectation of productivity and what defines success, which may require incremental steps to make this a reality.

***Maladaptive Self-Regulation***

Bakker and De Vries (2021) propose when job strain is high (dependent on daily job demands and resources) and supported by JD-R theory's proposition of high job demands and low job resources represents a high-stress environment (i.e., leading to high strain) will lead to more "maladaptive self-regulation cognitions and behaviors such as inflexible coping and self-undermining" (Bakker and De Vries, 2021 pg. 6). Bakker and De Vries (2021) state when individuals experience more job strain and subsequent burnout symptoms, they are less likely to select an appropriate coping strategy to match the situation, further they will not be able to monitor the effectiveness of the selected strategy. Furthermore, as job demands and strain increase, attentional narrowing occurs on the demand or stressors, thus reducing the capacity for the use of auxiliary coping strategies (i.e., exercise, recovery activities) (Bakker and De Vries, 2021). As additional job demands are placed on an individual in an already high job demands role, they will

stop doing those activities that were used to maintain their mental health, and instead focus on the task being asked of them (Bakker and De Vries, 2021). For participants in this study, who are experiencing the integration of job demands as a clinician, educator, and administrator, they are in a high demand environment, thus at times feelings of mental exhaustion arise. Further, even if mentally exhausted, participants felt an obligation to be present for clinic, procedures, overnight call, or an educational engagement instead of calling off or engaging in recovery for their mental health, even if recovery was what they may have needed. As a participant described, this is often experienced as out of their control as many other persons (i.e., patients, patients' family, staff, residents) are dependent on them being present regardless if they are mentally exhausted. Where in that moment it might be better served if they engaged in recovery and auxiliary coping strategies to recover their mental health to baseline.

***Strain***

Burnout is often defined as a chronic stress syndrome characterized by exhaustion, which is regarded as the "central strain dimension of burnout." Additionally, cynicism is defined "as a negative or excessively detached response to the work itself and/or to the individuals with whom the employees' interact while performing their job" (Bakker and Costa, 2014 pg. 113). Therefore, "burned-out individuals simultaneously experience high levels of chronic fatigue, and distance themselves emotionally and cognitively from their work activities" (Bakker and Costa, 2014 pg. 113). As previously mentioned, a combination of high job demands and low job resources are the work conditions for a stressful environment, and "job strain is dependent on daily job demands and resources" (Bakker and De Vries, 2021 pg. 5; Bakker, 2014). Thus, it is thought as

persons experience an increase in job strain, they will develop enduring burnout symptoms over days, weeks, and months (Bakker and De Vries. 2021). Viewing burnout from this continuum, or dialectic perspective, allows for an understanding that burnout is best seen as a range of experiences from acute fatigue to severe and persistent form of exhaustion and mental distancing (Bakker and De Vries, 2021; Leone et al., 2008, Schaufeli et al., 2009). Once enduring or chronic burnout is present, persons demonstrate self-undermining behaviors as demonstrated by Bakker and Colleagues (2022). Further, Bakker and colleagues (2022) demonstrated that chronic well-being influences the daily work experiences.

Placing this in context of the present study, the subtheme *cynical* suggests participants attempting to "distance[ing] oneself from work, and development of negative attitudes" or in other words no longer willing to invest effort (Bakker and De Vries, 2021 pg. 3). Thus, when participants did not want to invest their time into solving a problem seen as unsolvable or viewing positive feedback in a negative light (i.e., the positive feedback is not authentic, alterative motive) as they distanced themselves from their work. Further, participants experienced the feeling a dread, or negative response to work conditions. Interestingly this feeling of dread, occurred in the same context where participants at time feel engaged and satisfied. Thus, illustrating that "from time to time, *all* employees may experience higher than average levels and exhaustion and cynicism… in response to higher job demands [emphasis in original]" (Bakker et al., 2022 pg. 2; Bakker and Demerouti, 2017). In the present study, it cannot be determined whether cynicism was the result of exhaustion however being aware of the job demands that are causing the cynical experiences may allow for both the participant and leadership to

discuss prior to self-undermining behaviors ensue. As self-undermining, is thought to further increase job demands and job strain overtime, thus setting in motion a loss cycle (Bakker et al., 2022; Bakker and De Vries, 2021)

### Implications of Maladaptive Self-regulation

Expanding on the study by Bakker and colleagues (2022 pg. 17) where they demonstrated those individuals with chronic burnout (or what Bakker and De Vries (2021) regard as enduring burnout) may in fact create their own "'loss cycle' of job strain." Bakker and colleagues (2022) demonstrated those who experience chronic burnout responded to job demands with self-undermining behaviors (i.e., creating confusion, making mistakes, and starting conflicts) thus creating more job demands, and further job strain, thus setting in motion a possible loss cycle. One possible explanation occurs when high job demands are present with a lack of job resources, demonstrated by Bakker and colleagues (2022 pg. 16), where "resource loss (chronic burnout) resulted in more loss (weekly burnout) in response to weekly job demands, and consequently in dysfunctional coping and self-undermining behaviors." This is corroborated by Hobfoll (2001 pg. 355) with COR theory who proposes "loss [resource] is more potent than gain, loss cycles will be more impactful and more accelerated than gain cycles." For the present study, this implies for those experiencing job strain, or outright exhaustion and cynicism, as well as self-undermining behaviors, these PDs and APDs may need more assistance, i.e., support of colleagues and peers, chief residents, department leadership, feedback, or time for recovery. Further, avoidance of job demands (maladaptive self-regulation: avoidance coping) should be discouraged, and in its place should be an adaptive self-regulation strategy through job crafting, thus proactively designing the work

environment. This further supports an approach from both an organizational approach through human resource practice (i.e., recovery training, job crafting training) and healthy (i.e., transformational) leadership to reduce job strain and provide stable resources, as well as the employee through adaptive self-regulation (i.e., recovery and job crafting) (Bakker and De Vries, 2021). In addition, through open discussions with leadership about how PDs and APDs experience their job demands and job and personal resources, thus how they may or may not be experiencing job strain will allow for an individual specific approach to mitigate burnout and offer opportunities for growth and development in a highly engaging environment (Bakker and De Vries, 2021; Bakker et al., 2022). Further, having a discussion will enable an approach to address "*structural* causes of burnout" (Bakker and De Vries, 2021 pg. 5) and move away from the notion of burnout is a "simple stimulus-response approach" and "acknowledge that employees also play an active role in the creation and modification of their work environment" (Bakker et al., 2022 pg. 4).

## Limitations

As with most studies, this present study is not without limitations, however attempts were made to abate confounding factors and potential sources of overt bias. These limitations include concerns regarding generalizability, self-selection bias, participant demographics, inter-rater reliability, and choices of data collection methods.

### *Generalizability*

Factors which limit the generalizability (transferability) of this study include: it was conducted at one institution, albeit within differing departments and geographical separation, has a limited number of participants, and those participants were sampled

from a relatively select group of individuals within the larger academic medical center. Thus, one must be guarded in generalizing the results, as the experiences of these specific participants, to other institutions, or even to other PDs and APDs in other departments at the same institution, are unique to these individuals in the given, time, context, and setting. However, by providing rich descriptions and selecting participants from differing specialties, departments, locations, and genders, one can evaluate how their unique experiences may be transferable to other PDs and APDs at the same institution or more broadly to other institutions, who may have had similar experiences, job demands and resources. Further, the use of a theoretical framework, and investigation of how persons experience burnout, engagement, and general well-being (or unwell being) in context of their lived experience may improve transferability to others in exploring these phenomena.

Specifically, when considering the theme *It Takes a Village*, Baumeister and Leary (1995) promote relations to satisfy belongingness as a need and not merely a want, one may argue this may be a universal need regardless of institution, cohort, or even profession. Further, with all of healthcare mandated to use an EMR, many utilizing text messaging, and email, most clinicians are placed into a situation where they will have to manage *boundaries of connectivity* and how this integrates within their work life as well as their personal life. Further, exploring individuals' experiences with their specific and unique job demands and job resources in their specific and organization may be warranted.

### *Participant Demographics and Self-Selection Bias*

Participants were solicited for participation in this study utilizing purposeful sampling in an attempt to include as many differing specialties as possible, locations, genders, length of tenure, and persons who are underrepresented in medicine in the sample. However, following the solicitation email participants decided whether they wanted to participate in the study or not. Thus, the self-selection of participants limits the sample to not truly represent the diversity of the cohort. Further, those who chose to participate may have an inherent interest, bias towards, and intimate knowledge of physician well-being, specifically burnout and engagement. Conversely, those who declined may have differing experiences as well as those who were no recruited. Specifically, BIPOC individuals, although solicited, all declined to participate. One can only surmise how BIPOC individuals experience are different and unique in this particular institution and the larger context of healthcare in the US and society at large.

### *Inter-rater Reliability*

A single researcher collected, coded, and analyzed the data. With the amount of data to analyze it would not be feasible (although possible), for an additional researcher to analyze the entire dataset. In addition, another method for conducting inter-rater reliability is to have another researcher analyze a sub-set of the data, which enables a comparison of coding. However, striving for consistency of interpretation between multiple individuals assumes there is a single, fixed, objective reality, or truth, as "measured in quantitative research." Moreover, "one of the assumptions underlying qualitative research is that reality is holistic, multidimensional, and ever-changing" (Merriam and Tisdell, 2016 pg. 242). As such, due to the extended timeframe used for

data collection, utilization of multiple data collection methods, amount of data to analyze, and the familiarity of the researcher with the data (as well as participants), utilizing inter-rater reliability from a sub-set of the data would unlikely produce any notable changes in the outcome of data analysis.

### *Choice of Data-Collection Methods*

For this present study the utilization of semi-structured interviews, direct observation, and document analysis were chosen appreciating the strengths and limitations of each data collection method. Semi-structured interviews are limited by recall bias, partiality of "snapshots of a moment in time… entails understanding the complexity and partiality of any single interaction," and subjective in that "human beings are ever engaged in their interpretation of life" (Ravitch and Carl, 2016 pg. 149). However, the use of semi-structured interviews enabled the researcher to "uncover, understand, and engage with multiple subjectivities" (Ravitch and Carl, 2016 pg. 150) thus holistically exploring the experiences of the participants. This aided in meeting the aim of what Bakker and colleagues (2022 pg. 4) state as a missing component burnout literature: "[a] lack of insight in what employees actually do when they experience burnout and how this affects the way in which they deal with their work environment on a weekly basis."

For direct observation, critics may state the subjective nature of observational data (i.e., fieldnotes) and further the unreliable nature of human perception (Merriam and Tisdell, 2016). However, as Patton (1990) described there is inherent fallacy in equating routine human observation and with researchers, as routine human observers are not trained in social science observation nor were they prepared to make observations at that

moment in time. Thus, the researcher in this present study engaged in direct observation of participants to appreciate the context of the participants lived experience, to triangulate emerging findings, to be "used as reference points for subsequent interviews" (Merriam and Tisdell, 2016 pg. 139). Further, this enabled the researcher to pursue an aim of Bakker and colleagues (2014 pg. 403) "that burnout and engagement researchers should aim to link both concepts [burnout and engagement] to observable behaviors."

**Future Directions**

To the researcher's knowledge, this present study is the first to 1) explore the experiences of PDs and APDs in their various roles informed by both burnout and engagement literature, 2) utilize qualitative methods of data collection in exploring PD and APD experiences in their roles, 3) investigate PDs and APDs over an extended time frame, and 4) apply theoretical framework of burnout and engagement in PDs and APDs. This study presented the experiences of PDs and APDs of their roles in how those experiences of exhaustion, cynicism, meaning, purpose, and satisfaction manifested, however there are other areas to further our collective appreciation of burnout and engagement in PDs and APDs.

No BIPOC individuals were represented in this study, and it is important to explore how BIPOC PDs and APDs experience burnout and engagement, and to allow their voices and narratives to be added to the conversation. As Gnanadass and colleagues (2022 pg. 62) state: "Black and Brown faculty consistently face challenges being racially and ethnically diverse in institutions of higher education that are known more for being spaces that elevate and center whiteness (power structure and ruling ideology), than being inclusive and equitable spaces." The same authors describe their experiences of "Black

Tax" is a manifestation of "anti-Black racism which heuristically also represents racialized macro and microaggressions experienced by other racially minoritized groups" (Gnanadass et al., 2022 pg. 62). Thus, an exploration of how BIPOC physicians as well as those in the role of PD or APD experience their roles is necessary, in order to create "an equitable and liberatory environment" (Gnanadass et al., 2022 pg. 62).

Since the presence of community had a significant impact on how participants experienced their roles and position as a PD or APD, and conversely the absence of community experienced as a detriment, it would be worthwhile to explore how the community is experienced in more depth, as well as opportunities to enhance the benefits of an educational community. Specifically, developing a community of practice of PDs and APDs, or even more broadly to those clinician educators at this institution and exploring benefits, experiences, and perceptions of this community longitudinally. Further, exploring feedback in more depth is warranted on multiple fronts. First, feedback provided to the residents via PDs or APDs, and second feedback provided to PDs and APDs from residents. Exploring this bi-directional approach to feedback would hopefully allow for an appreciation of how the feedback dynamic, or as Telio and colleagues (2015 pg. 611-612) describe the "recognition of the significance of the supervisor-trainee relationship" or what those authors propose as an "educational alliance."

A future study could utilize the themes from this present study and informed by JD-R theory may be used to create a quantitative instrument to explore a larger cohort of PDs and APDs at the same institution as well as other academic medical centers. In addition, an intervention based on the concept of job crafting, as well as how to increase job resources, with a pre and post survey to explore how this intervention affected

participants job resources, job demands, and overall well-being. Another avenue to explore with burnout and engagement research in PDs and APDs would be to utilize a weekly diary design (Bakker et al., 2022). As everyday experience suggests persons are not always in the same affective state or mood, thus studies have demonstrated there are fluctuations in work engagement and job performance (Ohly et al., 2010). Therefore, diary designs "offer means of analyzing fluctuating data" by enabling researchers to collect data daily or even multiple times per day (Ohly et al., 2010 pg. 79).

**Conclusion**

Thoughtful consideration of the experiences of PDs and APDs in their roles and how it relates to their affective state of exhaustion, cynicism, career fulfillment, meaning, and overall well-being is needed to further the understanding of the complex phenomenon of burnout and engagement (Maslach and Leiter, 2017). Thus, exploring both positive and negative states of how one feels about their work is "complex and indeterminate" and "progress in this arena may not come from assessing the presence of absence of a specific state" (Maslach and Leiter, 2017 pg. 57). The results of this present study demonstrate the unique and context specific manner in which the same role can be both fulfilling, meaningful, and satisfying and at the same time being exhausting, and mentally draining (i.e., role of clinician), thus appreciating the nuance of their experience, and not binarizing into one or the other. Furthermore, the experience of a "tax" of doing those things experienced as exhausting, draining, and non-fulfilling, (i.e., EMR, insurance preapprovals) in order to be able to partake in those tasks they find meaningful, fulfilling, and satisfying (i.e., educating) demonstrated the complexity of their lived experience, and not a positive or negative state. However, having relationships, support,

feedback, and autonomy enabled participants to cope, find meaning, and form social bonds to overcome challenges. In other words, having available job resources to mitigate the demands placed before them as a PD or APD.

Further, those opportunities for growth, positive framing, and introspection enabled participants to find motivation, to balance the challenging and exhausting aspects of their careers. Specifically, participants being aware and cognizant of times of mental exhaustion and burnout, and moreover seeing the positive aspects (i.e., prioritizing responsibilities) of those moments, and looking towards the future. However, when there was a failure of communication, lack of control, or no support, participants experienced a sense of hopelessness, as always being asked to do more, with no more available resources to meet the next demand. Moreover, the results of this present study demonstrate individuals in their work environment are not passive or reactive, but proactive and take personal initiative to change their work environment or how they perceive their work environment. Therefore, appreciating burnout and engagement from a simple stimulus response approach, does not consider the individual has an active role in their environment (Bakker et al., 2022). As such, a top-down approach through the organization's leadership as well as the individual may be a more appropriate approach for future interventions. Furthering a collective understanding of PDs and APDs experiences through their own voice and actions allowed for richer, more nuanced understanding of their lived experience as it relates to their overall well-being, exhaustion, motivation, and meaning of their careers.

The results of this study should be used to inform leadership, physicians, and specifically PDs and APDs, of the complexity of their positions and how this relates to

their well-being. It should further be a starting point of using theoretical frameworks to inform the understanding of both the negative (burnout) and the positive (engagement). This study should guide discussions between leadership and PDs and APDs about how they each individually experience their job demands and their job resources, to enable for a more nuanced and individualized approach to well-being that is addressing the structural as well as employee driven factors. A panacea or an approach to completely rid a work environment and persons you interact within that environment of burnout, is not an obtainable goal, but appreciating and be mindful of those moments of both engagement and burnout as a participant stated: “I mean I think burnout, you know, teaches us something too, like there's value in that we're never going to get rid of it so I think we have to learn to cope with it and find those times that give us life.” (Participant B Interview)

# APPENDIX A: IRB Documents

## Email to Participants

Dear Dr. [--],

My name is Kyle Robertson, and I am an Anatomy Education Track PhD student in the Department of Anatomy, Cell Biology & Physiology under the advisory of Dr. Jessica Byram. I am sending this email to you in hopes that you will participate in a study I am conducting for my dissertation.

As you are likely aware, there has been an increased discourse around physician well-being over the past decade with many researchers interested in understanding the prevalence of burnout in addition to resilience and work engagement. Most of these studies have been conducted via self-reported questionnaires in an attempt investigate the prevalence of burnout and engagement or resilience in physicians, medical students, residents and other healthcare professionals. Specifically, there have been only but a few studies looking at burnout within the group of residency program directors and very few exploring these phenomena over a length of time. The aforementioned program director studies were attempting to better understand the reasons as to why program directors left the position, the prevalence of burnout and contributing factors.

I am interested in the program director group, as myself, was a program director of the Pathologists' Assistant Master Program at IUSM. Granted this was not a residency program, it nonetheless exposed me to the stresses of having administrative tasks, recruitment and interviewing, and accreditation requirements all pulling me in different directions. The study I am proposing would look at burnout and engagement as a continuous and ever evolving phenomena thus not a fixed static entity. To accomplish this, I am asking for your participation in a year long study where I will conduct interviews at 3 points in time as well as observations in your various roles. The interviews will be approximately 1 hour in length and be conducted at a mutually agreed upon time, location and date. The observations will occur every other month, for 3-4 days per month and a maximum of 4 hours per observation. The goal of the observations will be to observe you in the various roles that make up your daily, weekly and monthly tasks, to include clinical responsibilities, administrative tasks (designated office time), and interaction with residents. In addition, during this time I will also be performing document analysis of various accreditation requirements, institutional policies and curriculum. I have attached a document titled Data Collection Timeline to give you a better idea of how data collection for the study will be conducted. Also, attached is a consent form with additional information on confidentiality, participant requirements, and other pertinent study information.

In light of the current pandemic, the preferred method of interview is face-to-face but this will likely not be feasible and Zoom or other web-based interaction will take its place. In addition, the observations are contingent on the access of non-healthcare personal in certain areas and locations as well as your own time constraints given the situation. Please complete the attached consent form if you are interested in participating, scan and email the completed form to this email address. Upon receipt of the consent, I will be in contact with you to set-up interviews and observation times and locations.

Thank you for your valuable time, and consideration in helping with this study. Please contact me if you have any questions.

Best,

Kyle Robertson, MS
PhD Student
Department of Anatomy, Cell Biology & Physiology

**Informed Consent and Statement of Research Intent**

**INDIANA UNIVERSITY INFORMED CONSENT STATEMENT FOR RESEARCH**

**How do Residency Program Directors Experience Burnout and Engagement at a Large Academic Center and a Community-Based Setting?**

**ABOUT THIS RESEARCH**
You are being asked to participate in a research study. Scientists do research to answer important questions which might help change or improve the way we do things in the future.

This consent form will give you information about the study to help you decide whether you want to participate. Please read this form, and ask any questions you have, before agreeing to be in the study.

**TAKING PART IN THIS STUDY IS VOLUNTARY**
You may choose not to take part in the study or may choose to leave the study at any time. Deciding not to participate, or deciding to leave the study later, will not result in any penalty or loss of benefits to which you are entitled and will not affect your relationship with Indiana University and the Indiana University School of Medicine.

**WHY IS THIS STUDY BEING DONE?**
The purpose of this study is to explore the phenomenon of burnout and engagement in residency program directors through interviews, observations and document analysis with the goal of acquiring a more holistic view of the phenomena. In other words, rather than completing a self-reported questionnaire at a single moment in time, this study will allow the researcher and participants to tell a more nuanced picture of various factors which promote engagement or lead to burnout. The following research questions will be addressed:

1. How do policies, procedures, administrative tasks affect burnout or engagement?
2. How do the multiple roles of a residency program director affect their well-being and career fulfillment?
3. How do societal and culture pressures influence burnout or engagement?
4. What personal attributes promote engagement or burnout and how do those affect the program director?

You were selected as a possible participant because you are a resident program director at a large academic medical center or community-based hospital, which will allow the researcher to explore the cultural and institutional similarities and differences.

The study is being conducted by Kyle Robertson, MS, PhD student under the advisory of Dr. Jessica Byram in the Department of Anatomy, Cell Biology & Physiology.

**HOW MANY PEOPLE WILL TAKE PART?**
If you agree to participate, you will be one of four program director participants taking part in this study.

**WHAT WILL HAPPEN DURING THE STUDY?**
If you agree to be in the study, you will do the following things:

- Participate in 3 one-on-one interviews each approximately 1 hour in length, occurring at the beginning, middle, and conclusion of the study (12-month study length). The interviews will be scheduled at mutually agreeable dates, times and locations which are convenient for the participant. The preferred method of interview will be face-to-face, but zoom or other web-based communication will also be made available if necessary.
    - The interviews will be audio recorded to allow the researcher to go back to check the transcript for accuracy.
- Participant observation to occur at various formal settings where the participant conducts daily activities to include: clinical responsibilities, office or administrative hours, and educational settings with residents:
    - The observations will occur in 3-4 hour time allotments, 3-4 days per month occurring on an every other month basis over the course of the study. This will result in up to 24 days and 96 hours of observation per participant.
    - No audio or video recording will take place during the observations.
    - The location, dates and times will be mutually agreed upon by the participant and the researcher.
- Document analysis:
    - The researcher will read and analyze accreditation documents, department policies, curriculum and other institutional documents to better understand the complexities and intricacies of the program directors daily work experience and may ask questions related to these documents.

**WHAT ARE THE RISKS OF TAKING PART IN THE STUDY?**
While participating in the study, the risks, side effects, and/or discomforts include:

- A risk of participating in the one-on-one interviews is being uncomfortable answering questions and recalling past events along with discussing personal content.
- During observation, there is a possible risk of observing identifiable information.
- There is a small risk of possible loss of confidentiality.

In order to mitigate the above possible risks the researcher will do the following:

- While engaging in the one-on-one interview, you as the participant may inform the researcher at anytime that you are uncomfortable or do not want to answer a particular question. The audio recordings and subsequent transcriptions will be saved using a random identifier that only the researcher will have access, and all potentially identifying information will be deleted from the transcripts. The interviews will be audio recorded to allow the researcher to go back to check the transcript for accuracy. This includes any information about the program director's role, specialty, and locations of employment. Both the audio recordings and transcripts will be discarded at the conclusion of the study.
- During participant observation, brief jottings and minimal note taking will occur in the actual setting with pseudonyms or alternative identifiers used, thus people who may oversee the notes will not be able to identify those in about which the note was written. Field notes will be written at the conclusion of the observation and will be stored in a passphrase protected account that the researcher will only have access.
- At the conclusion of each observation, a discussion with the program director about events will be conducted to assure the researcher depicts the events in an accurate and confidential manner.

**WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THE STUDY?**

The benefits to participation in the study that are reasonable to expect are to contribute to a better understanding of the phenomenon of engagement and burnout in order to build personal and institutional interventions. In addition, you may find it beneficial to reflect and articulate some of the challenges or positives of your career to make informed, positive personal growth.

**HOW WILL MY INFORMATION BE PROTECTED?**

Efforts will be made to keep your personal information confidential. We cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law. No information which could identify you will be shared in publications about this study. Field notes written will be de-identified with only the researcher in possession, and at the conclusion of the study the field notes will be destroyed. The one-on-one interviews will be audio recorded and filed with a randomly generated identifiers and stored in a passphrase protected account which only the researcher will have access. At the conclusion of the study the audio recording, transcriptions and other relevant notes will be discarded.

Organizations that may inspect and/or copy your research records for quality assurance a nd data analysis include groups such as the study investigator and his/her research associa tes, the Indiana University Institutional Review Board or its designees, and any state or fe deral agencies who may need to access your medical and/or research records (as allowed by law).

**WILL I BE PAID FOR PARTICIPATION?**

You will not be paid for participating in this study.

**WHO SHOULD I CALL WITH QUESTIONS OR PROBLEMS?**
For questions about the study contact the researcher, Kyle Robertson. After business hours,
For questions about your rights as a research participant, to discuss problems, complaints, or concerns about a research study, or to obtain information or to offer input, please contact the IU Human Subjects Office at 800-696-2949 or at irb@iu.edu.

**CAN I WITHDRAW FROM THE STUDY?**
If you decide to participate in this study, you can change your mind and decide to leave the study at any time in the future. If you decide to withdraw, contact Kyle Robertson (_____) and you will be removed from the study.

**PARTICIPANT'S CONSENT**
In consideration of all of the above, I give my consent to participate in this research study. I will be given a copy of this informed consent document to keep for my records. I agree to take part in this study.
**Participant's Printed Name:**
**Participant's Signature**: **Date**:
**Printed Name of Person Obtaining Consent:**
**Signature of Person Obtaining Consent**: **Date**:

## APPENDIX B: Interview Protocols

### Interview 1

### General overview

- Tell me about how you came to be [whatever specialty ie general surgeon, IM physician, Family Physician or Anesthesiologists].
- How did you come to be the program director?
- What made the position of PD desirable?
- Who was influential in you finding this as a career path?

### Engagement

- Tell me about a moment or activity when you feel most engaged with your work.
    - What about this moment makes you feel engaged?
    - Who are those that are usually present? (residents, colleagues, medical students)
- What aspect of your career do you find most meaningful?
    - How often do you get to engage with this portion of your career?

### Personal Accomplishment

- What about your career gives you the feeling of personal accomplishment?
    - How often do you feel accomplished?
    - What about the scenario allows you to feel accomplished?
    - Tell me about a time when you felt you had a low amount of accomplishment.

### Emotional Exhaustion

- Tell me about a moment when you felt mentally worn-out.
    - How did you feel during this moment and how often does this occur?
    - What strategies did you use to overcome this moment?
- Describe moment where either resident moral was an enhancement to emotional state or was a detriment.
- How has the thought of litigation or discourse surrounding the culture of litigation affected your career?

### Depersonalization

- Tell me of a time when you felt detached, calloused or cynical in any aspect of your career.
    - Who is present in these situations?
    - How often does this occur?
    - How did you reconcile this situation?

### Resources and Possibly Depletion of Resources

- Describe how the current COVID pandemic has impacted the access to resources (i.e. departmental, staff, or other outlets of support)
- What is your philosophy or thoughts in providing formal and informal feedback?
- Are there stresses when dealing with ACGME administrative tasks?
- If so, what specifically about the task causes stress and how are these handled?
- Describe how you balance PD role, clinical practice, and personal/family time.
- During the past year, can think of time when there was a conflict between professional obligations and family?
- If so, what was the scenario and how was this resolved?
- What type of support to you receive from your department (ie chair, chief resident, support staff)?
- What type of support do you receive from your personal life?
- Tell me about any mentors or role models, as a resident, faculty or outside of medicine.
- What significance have they played in you developing into your role of PD?
- Have you contemplated stepping down as PD?
- If so what experience(s) made you feel this way? If not, what motivates you to continue to perform as the PD?
- Reflecting upon what we have discussed is there anything else you would like to add?

**Interview 2**

- How have the recent events (death of pediatric resident, Dr. [name], Jan 6th, COVID) impacted your role as program director?
- Has the school of medicine and or department been supportive?
- How has it impacted the residents and have they voiced any concerns to you?

**Resilience** (based on **Brief Resilience Scale, Smith et al 2008**)

- Describe a challenging career moment and how well do you think you were able to recover from this situation?
    - What allowed you to recover?
    - Is there a recent experience that comes to mind? If so, how was that situation reconciled?

- Describe how you handle stressful events?
    - What events do you find to be most stressful?
    - How long typically does it take for you to feel back to your previous self?

- What resources to you call-upon to deal with stressful circumstances?

**Resident Interviews**

- Compare and contrast in-person versus virtual and stresses associated with each?

- What has been the most challenging aspect to virtual interviews? Benefits?

- Compared to in-person interviews are you able to gain the same insights into how they will perform in your program? If not, what are strategies that may work in the future?

- What are your perceptions of interviewing resident applicants after being more conscience of the holistic interview process? (Participant A, as they implemented this interview strategy)

**Feedback**

- What strategies have you used to implement better resident feedback (either formal or informal)?

- How have the resident only meetings proceeded in an attempt for them to bring up issues and concerns? What issues have been brought to your attention, if any, from these meetings?

- What strategies or philosophy do you use when guiding residents to the correct thought process or critical thinking when addressing an issue?

**Healthcare System or Organizational**

- How does working in a large health care system challenge your values or ethics?

    - How do reconcile or handle patients who are non-compliant with medications or other treatment plans?

- How are values affected when care or treatment may be altered do to insurance or other inequalities?
    - Prior authorizations? Patients with little or no insurance?

- Presenteeism (is the behavior of coming into work when sick), do you feel a pressure or commitment to come in to work even when ill? Is there pressure or a feeling of obligation from the organization, colleagues or to your patients to always be present?
    - Is it mostly driven by negative or positive motivations? If mostly negative, does it 'inflate' burnout prevalence figures? If mostly positive, does it contribute to team/unit engagement?)

**Miscellaneous**

- How has the increase in COVID cases affected your residents? How has this affected how your duties and responsibilities as a program director?

- How do you approach challenging conversations with families or patients? (Terminal illness, poor outcome, resident error, treatment goals)

- Describe ways that you have "crafted" your scope of practice to allow you to focus on strengths. If not, describe limitations to you being able to "craft" your career/job.

**Interview 3**

- The aspects you have found most engaging and meaningful in the past do you still find the same amount of engagement and meaning?
    - If yes, how do you attempt to incorporate that aspect into you day-to-day or week-to-week?
    - If not, what has changed and is there another aspect that you have found engaging or meaningful?

- What has been the most challenging aspect of directing a resident program during the past year?

- Reflect on the COVID-19 experience as physician and program director

- What feedback or support have you received from residents or department over the past year?

- What has been the most rewarding professional accomplishment or a proud moment of the past year?

- Describe a moment when you feel immersed or absorbed in a job task?

- How has the past 18 months shaped how you will proceed as a program director?
    - Initiatives started that will continue?

- What projects are you looking forward to accomplishing in the future?

- In general, what challenges do you foresee arising in graduate medical education?

- Reflecting on the past year, what have you done to maintain your personal well-being:
    - mental rejuvenation,
    - engagement with your professional responsibilities

**One-Time Interview of Additional Program Directors**

**General overview**

- Tell me about how you came to be [whatever specialty ie general surgeon, IM physician, Family Physician or Anesthesiologists].

- How did you come to be the program director?

- What made the position of PD desirable?

- Who was influential in you finding this as a career path?

**Engagement**

- Tell me about a moment or activity when you feel most engaged with your work.
    - What about this moment makes you feel engaged?
    - Who are those that are usually present? (residents, colleagues, medical students)

- What aspect of your career do you find most meaningful?
    - How often do you get to engage with this portion of your career?

- Describe ways that you have "crafted" your scope of practice to allow you to focus on strengths. If not, describe limitations to you being able to "craft" your career/job.

**Personal Accomplishment**

- What about your career gives you the feeling of personal accomplishment?
    - How often do you feel accomplished?
    - What about the scenario allows you to feel accomplished?
    - Tell me about a time when you felt you had a low amount of accomplishment.

**Emotional Exhaustion**

- Tell me about a moment when you felt mentally worn-out.
    - How did you feel during this moment and how often does this occur?
    - What strategies did you use to overcome this moment?

- Describe moment where either resident moral was an enhancement to emotional state or was a detriment.

- How has the thought of litigation or discourse surrounding the culture of litigation affected your career?

**Resilience**

- Describe a challenging career moment
    - How well were you able to recover? What strategies or resources used?
    - Describe professional situations or events that you find stressful

- Describe how these situations are handled.

**Depersonalization**

- Tell me of a time when you felt detached, calloused or cynical in any aspect of your career.
    - Who is present in these situations?
    - How often does this occur?
    - How did you reconcile this situation?

**Resident Interviews**

- Compare and contrast in-person versus virtual interviews
    - Stresses with either version?

- What has been the most challenging aspect to virtual interviews? Benefits?

- Compared to in-person interviews are you able to gain the same insights into how they will perform in your program? If not, what are strategies that may work in the future?

- What are your perceptions of interviewing resident applicants after being more conscience of the holistic interview process? (Participant A, as they implemented this interview strategy)

- How was the Match experience altered?

**Resources and Possibly Depletion of Resources**

- Describe how the current COVID pandemic has impacted the access to resources (i.e. departmental, staff, or other outlets of support)

- Are there stresses when dealing with ACGME administrative tasks?
    - If so, what specifically about the task causes stress and how are these handled?

- Describe how you integrate your PD role, clinical practice, and personal/family time.

- During the past year, can think of time when there was a conflict between professional obligations and family?
    - If so, what was the scenario and how was this resolved?

- What type of support to you receive from your department (ie chair, chief resident, support staff)?
    - What type of support do you receive from your personal life?

- Tell me about any mentors or role models, as a resident, faculty or outside of medicine.
    - What significance have they played in you developing into your role of PD?

- Have you contemplated stepping down as PD?
    - If so what experience(s) made you feel this way? If not, what motivates you to continue to perform as the PD?

- Reflecting upon what we have discussed is there anything else you would like to add?

**Feedback**

- What strategies or philosophy do you use when guiding residents to the correct thought process or critical thinking when addressing an issue?

- What is your philosophy or thoughts in providing formal and informal feedback?

**Healthcare System or Organizational**

- How does working in a large health care system challenge your values or ethics?

    - How do reconcile or handle patients who are non-compliant with medications or other treatment plans?

- How are values affected when care or treatment may be altered do to insurance or other inequalities?

    - Prior authorizations? Patients with little or no insurance?

- Presenteeism (behavior of coming into work when sick), do you feel a pressure or commitment to come in to work even when ill? Is there pressure or a feeling of obligation from the organization, colleagues or to your patients to always be present?

    - (Is it mostly driven by negative or positive motivations? If mostly negative, does it 'inflate' burnout prevalence figures? If mostly positive, does it contribute to team/unit engagement?)

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# CURRICULUM VITAE

| **NAME:** | **Robertson** | **Kyle** | **A** |
|---|---|---|---|
| | Last | First | Middle |

**EDUCATION:**

| | **Degree** | **Inclusive Dates** |
|---|---|---|
| GRADUATE: | | |
| Indiana University<br>Indianapolis, IN, USA | PhD Department of Anatomy, Cell Biology & Physiology | 2018-2022 |
| Indiana University<br>Indianapolis, IN, USA | M.S. Pathology-Pathologists Assistant | 2009-2011 |
| UNDERGRADUATE: | | |
| Purdue University<br>West Lafayette, IN, USA | B.S. Medical Technology | 2002-2006 |

**APPOINTMENTS:**

**ACADEMIC:**

| **Institution** | **Rank/Title** | **Inclusive Dates** |
|---|---|---|
| Indiana University School of Medicine, Indianapolis, IN | Program Director-Pathologists' Assistant Program | 7/2017 to 9/2019 |
| Indiana University School of Medicine, Indianapolis, IN | Assistant Professor Clinical Pathology | 7/2017 to 9/2019 |
| Indiana University School of Medicine, Indianapolis, IN | Pathology Laboratory Coordinator | 10/2015 to 7/2017 |

**NON-ACADEMIC:**

| **Institution/Entity** | **Title** | **Inclusive Dates** |
|---|---|---|

| | | |
|---|---|---|
| Alverno- Franciscan Health Lafayette, IN | Medical Technologist, Generalist, full-time 2006-2009, part-time 2009-2014. | 6/2006 to 7/2014<br>7/2020 to present |
| Clinical Pathologist Associates, Austin, TX | Pathologists' Assistant | 7/2011 to 9/2011 |
| Indiana University Health Physicians, Indianapolis, IN | Pathologists' Assistant, PRN | 7/2012 to 2019 |
| Riverview Health, Noblesville, IN | Pathologists' Assistant and Medical Technologist, full-time 2012-2015, part-time 2017-2021 | 4/2012 to 6/2021 |

## LICENSURE, CERTIFICATION, SPECIALTY BOARD STATUS

| Credential | Inclusive Dates |
|---|---|
| Medical Technologist: American Society for Clinical Pathology | 2006 to present |
| Pathologists' Assistant: American Society for Clinical Pathology | 2011 to present |

## PROFESSIONAL ORGANIZATION MEMBERSHIPS:

| Organization | Inclusive Dates |
|---|---|
| American Association for Pathologists' Assistants | 2011 to 2019 |
| American Association for Anatomists, student member | 2019 to present |

## PROFESSIONAL HONORS AND AWARDS:

| Award Name | Granted By | Date Awarded |
|---|---|---|
| Golden Key Honor Society | IUPUI chapter | 2011 |
| David B. Burr Fellow in Anatomical Education | Department of Anatomy, Cell Biology & Physiology, Indiana University School of Medicine | 2020-2021 |

| | | |
|---|---|---|
| Annual Meeting Travel Award | American Association for Anatomists | 2020,2021, 2022 |
| Student/Postdoc Poster Award Finalists | American Association for Anatomists | 2022 |

**PROFESSIONAL DEVELOPMENT:**

| **Course/Workshop Title** | **Provider** | **Date** |
|---|---|---|
| AAPA National Conference, (Toronto, Canada) | American Association of Pathologists' Assistants | 2015 |
| AAPA National Conference (San Antonio, TX) | American Association of Pathologists' Assistants | 2017 |
| GRIPE Annual Winter Meeting (Las Vegas, NV) | Group for Research in Pathology Education | 2018 |
| NAACLS Workshop: "Top Pitfalls When Completing a NAACLS Self-Study… And Other Tips for Success" (Houston, TX) | National Accrediting Agency for Clinical Laboratory Sciences | 2018 |
| CGEA Spring Conference (Grand Rapids, MI) | AAMC (Association of American Medical Colleges) | March 2019 |
| Pathology Grand Rounds | Department of Pathology and Laboratory Medicine. 2 hrs/mo. | Fall 2009 to 2019 |
| Gross Conference | Department of Pathology and Laboratory Medicine: 1 hr/mo. | Fall 2009 to 2018 |
| Tumor Board | Riverview Health, Noblesville, IN 1 hr/mo | Summer 2012-2/2015 |
| | | June-August 2021 |

| | |
|---|---|
| Achieving Inclusivity in Medicine (AIM) Facilitator Training | Indiana University School of Medicine, in conjunction with the Academy of Communication in Healthcare (ACH) |

## TEACHING:

### COURSES DIRECTED

**Course: C-692 Pathologists' Assistant Autopsy and Forensic Pathology Techniques**
Institution: Indiana University School of Medicine
Format: Lecture and Laboratory; 3 credits
Role: Course Director

Term: Summer 2018
Enrollment: 4
Lecture contact hours: 20
Laboratory contact hours: 10
Role: ***Course Director***. *I served as course director, lecturer, laboratory facilitator, as well as organized and scheduled guest lectures. I implemented the use of human donor hearts to provide students an opportunity to dissect in the manner of an autopsy. In addition, I developed autopsy case modules to facilitate the students critical thinking and problem solving with a foundation in general and fundamental pathologic concepts. I created and organized course content into a course management system (Canvas).*

Term: Summer 2017
Enrollment: 4
Lecture contact hours: 20
Laboratory contact hours: 10
Role: ***Course Director***. *I served as course director, lecturer, laboratory facilitator, and performed all course organizational functions. I implemented the use of retained educational autopsy teaching tissues and histopathologic slides from prior autopsy cases to enable to students to more fully appreciate the combining clinical presentation, laboratory findings, gross pathology, and microscopic pathology into a single clinicopathological correlation.*

Term: Summer 2016
Enrollment: 4
Lecture contact hours: 20
Laboratory contact hours: 10
Role: ***Course Director.*** *I served as course director, lecturer, laboratory facilitator, and performed all course organizational functions. I assumed the role of forensic pathology content lecturer, as such I developed six new lectures covering the topic of forensic pathology.*

Term: Summer 2015
Enrollment: 5

Lecture contact hours: 10
Laboratory contact hours: 10
Role: ***Co-Course Director***. *I provided lectures over general pathology concepts as well as an introduction to autopsy techniques (evisceration, gross dissection, special techniques and considerations). I facilitated laboratory sessions to allow students to initiate the process of translating concepts into practice.*

**Course: C-691, Gross Surgical and Pediatric Pathology Techniques**
Institution: Indiana University School of Medicine
Format: Lecture and Laboratory; 3 credits
Role: Course Director

Term: Summer 2019
Enrollment: 5
Lecture contact hours: 10
Laboratory contact hours: 8
Role: ***Course Director.*** *I served as course director, lecturer, laboratory facilitator, and laboratory specimen preparation. I implemented daily quizzes covering reading content prior to lecture as well as discussion boards for students to post questions and comments which I provided feedback.*

Term: Summer 2018
Enrollment: 4
Lecture contact hours: 18
Laboratory contact hours: 12
Role: ***Course Director.*** *I served as course director, lecturer, laboratory facilitator. Created, developed, and implemented course content into course management system (Canvas) to include new course resources (cancer dictation templates, College of American Pathologist (CAP) cancer protocols, sample gross descriptions of surgical cases, and videos of grossing techniques/procedures).*

Term: Summer 2017
Enrollment: 4
Lecture contact hours: 4
Laboratory contact hours: 20
Role: *Instructor (Course Director: Randy Stine, MPH, PA(ASCP)) I served as the laboratory facilitator to include preparing retained surgical tissues and provided demonstrations of surgical grossing techniques. Provided lecture content of normal and pathology of the placenta, in addition to translating concepts into hands on dissection.*

Term: Summer 2016
Enrollment: 4
Lecture contact hours: 4
Laboratory contact hours: 20
Role: *Instructor (Course Director: Randy Stine, MPH, PA(ASCP)) I served as the laboratory facilitator to include preparing retained surgical tissues and*

*demonstrations of surgical grossing techniques. Provided lecture content of normal and pathology of the placenta, in addition to translating concepts into hands on dissection.*

Term: Summer 2015

Enrollment: 4
Lecture contact hours: 4
Laboratory contact hours: 20
Role: *Instructor (Course Director: Randy Stine, MPH, PA(ASCP)) I implemented and developed the laboratory component of the course. This entailed preparing specimens for both demonstrations, in addition to examples for the students to apply learned techniques to tissues.*

**PROFESSIONAL COURSES**

**Course: MED-X 660, Neuroscience and Behavior**
Institution: Indiana University School of Medicine (IUSM)
Format: Lecture, Laboratory, & Small Group
Role: Associate Instructor

Term: Spring 2021

Enrollment: 24 (West Lafayette regional campus of IUSM)
Small group contact hours: 20
Laboratory contact hours: 4
Role: *Associate instructor (Course director: S. Khirallah, MD, PhD) This is a team-taught comprehensive introduction to structure, function, and disorders of the human nervous system using a multidisciplinary approach integrating neuroanatomy, neurophysiology, and neuropharmacology for medical (MD) students. I participated in two "wet-lab" sessions providing instruction on neuroanatomical structures with donor brain tissues, as well as facilitate small group instruction.*

Term: Spring 2020

Enrollment: 146
Small group contact hours: 15
Laboratory (virtual due to COVID-19 pandemic): 4
Role: *Associate instructor (Course director: J. Richardson, PhD) This is a team-taught comprehensive introduction to structure, function, and disorders of the human nervous system using a multidisciplinary approach integrating neuroanatomy, neurophysiology, and neuropharmacology for medical (MD) students. I participated in two 2-hour virtual neuroanatomical laboratories facilitating the identification of external landmarks as well as brainstem structure and up to 15 hours of small group facilitation.*

**Course: MED-X, Endocrine, Reproductive, Musculoskeletal and Dermatologic (ERMD)**
Institution: Indiana University School of Medicine (IUSM)
Format: Lecture & Small Group

Role: Associate Instructor

Term: Spring 2021

Enrollment: 25
Small group contact hours: 20
Role: *Associate Instructor (Course director: J. Stout, MD) This course is designed to advance students' knowledge of physiology, pathophysiology, and pharmacology of the endocrine, reproductive, musculoskeletal, and dermatologic systems. I participated in administration of small groups, facilitating discussion of content via problem and case-based sessions.*

**Course: MED-X740, Gastrointestinal & Nutrition**
Institution: Indiana University School of Medicine (IUSM)
Format: Lecture & Small Group
Role: Associate Instructor

Term: Fall 2020

Enrollment: 25 (West Lafayette regional campus of IUSM)
Small group contact hours: 30
Role: *Associate instructor (Course director: J. Stout, MD) This course is designed to advance the students' knowledge in the physiology, pathophysiology, and pharmacology of the gastrointestinal system enabling the students to describe the major disease states with the accompanying histopathologic and clinical laboratory characteristics for medical (MD) students. I facilitated 10 small group discussions in various problem and cased based sessions.*

**Course: MED-X620, Human Structure**
Institution: Indiana University School of Medicine
Format: Lecture and Laboratory; 8 credits
Role: Associate Instructor
Term: Fall 2021 (West Lafayette Regional Campus)

Enrollment: 24
Laboratory Contact hours: 50
Role: *Associate Instructor (Course Director: Samar Khirallah, MD, PhD) This is a team-taught dissection-based gross anatomy course covering human anatomy, embryology, and histology for professional medical (MD) students. I participated in laboratory hands on dissection of all content blocks, practical exam set-up, administration as well as grading. In addition, I assisted and administered Histology content review sessions.*

Term: Fall 2020

Enrollment: 178
Laboratory contact hours: 40
Role: *Associate Instructor (Course Director: A. Deane, PhD) This is a team-taught dissection-based gross anatomy course covering human anatomy, embryology, and histology for professional medical (MD) students. I participated*

*in laboratory hands on dissection of all content blocks, practical exam set-up, administration as well as grading.*

Term: Fall 2019

Enrollment: 146
Lecture contact hours: 1
Laboratory Contact Hours: 50
Role: *Associate Instructor (Course Director: A. Deane, PhD) This is a team-taught dissection-based gross anatomy course covering human anatomy, embryology, and histology for professional medical (MD) students. I participated in laboratory hands on dissection for all blocks, practical exam set-up, administration as well as grading. In addition, I provided a 1-hour lecture in Block 4 (head and neck).*

**Course: ANAT-D 528 Human Anatomy for Health Care Professionals**
Institution: Indiana University School of Medicine
Format: Lecture and Laboratory; 5 credits
Role: Associate Instructor

Term: Summer 2019

Enrollment: 125
Lecture contact hours: 3
Laboratory contact hours: 50
Role: *Associate instructor (Course director: M. McNulty, PhD) This course is a dissection based gross anatomy course covering human anatomy for Master of Physician Assistant Studies (MPAs), doctoral physical therapy (DPT) students, and doctoral occupational therapy (OTD) students. I delivered two 90-minute lectures in covering the thorax to include mediastinum. In addition, I was present for all laboratory hands on dissection instruction, practical exam set-up, proctoring of written exam, and grading.*

**Course: 93CA605, Pathologic Basis of Disease**
Institution: Indiana University School of Medicine (IUSM)
Format: Lecture & Laboratory
Role: Laboratory Coordinator
Term: Fall and Spring 2016-2017

Enrollment: 140
Laboratory contact hours: 8-10 per week
Role: *Laboratory Coordinator (Course director: A. Inman, MD) This is a yearlong course for medical (MD) students, providing first an introduction of general mechanism of disease with progression into systems-based pathology, both gross and microscopic features. I selected histopathologic slides for student laboratory sessions as well as gross pathologic specimens. In addition, I*

*facilitated instruction of both microscopic and gross pathology in small group and individual sessions.*

Term: Fall and Spring 2015-2016

Enrollment: 140
Laboratory contact hours: 8-10 per week
Role: *Laboratory Coordinator (Course director: A. Inman, MD) This is a yearlong course for medical (MD) students, providing first an introduction of general mechanism of disease with progression into systems-based pathology, both gross and microscopic features. I selected histopathologic slides for student laboratory sessions as well as gross pathologic specimens. In addition, I facilitated instruction of both microscopic and gross pathology in small group and individual sessions.*

**GRADUATE COURSES**

**Course: ANAT-D 501, Human Gross Anatomy**
Institution: Indiana University School of Medicine (IUSM)
Format: Lecture & Laboratory
Role: Associate Instructor

Term: Spring 2021

Enrollment: 41
Lecture contact hours: 3
Laboratory contact hours: 45
Role: *Associate Instructor (Course director: J. Organ, PhD) This course is designed to provide the basic structure and function of the human body for those graduate students who intend to further pursue a career as a healthcare professional or biomedical research via lecture and laboratory (complete online virtual format for 2021 due to COVID-19 pandemic). I created and recorded two 90-minute lectures covering content of the head and neck (neck, eye, orbit, nasal cavity, oral cavity, and pharynx). I facilitated virtual laboratory sessions via Zoom for all content blocks.*

Term: Spring 2019

Enrollment: 38
Lecture contact hours: 3
Laboratory contact hours: 40
Role: *Associate instructor (Course director: J. Organ, PhD) This course is designed to provide the basic structure and function of the human body for those graduate students who intend to further pursue a career as a healthcare professional or biomedical research via lecture and a dissection-based laboratory. I created and provided 3 hours of lecture content covering the anterolateral abdominal wall and abdominal structures. In addition, I was present for all hands-on dissection-based instruction in the cadaver laboratory.*

**Course: ANAT-D 527, Neuroanatomy: Contemporary and Translational**
Institution: Indiana University School of Medicine (IUSM)
Format: Lecture & Laboratory
Role: Associate Instructor

Term: Spring 2020

Enrollment: 23
Lecture contact hours: 1
Laboratory contact hours: 4
Role: *Associate instructor (Course director; K. Byrd, PhD) This course is taught by a multidisciplinary team via lectures and laboratory sessions of neuroanatomical structures and function to those graduate students pursuing graduate research or healthcare professions. I created a pre-lab presentation of internal structures of cerebrum and vascular supply, prior to a hands-on neuroanatomy identification in which I assisted in structure identification with students. As the course moved into a completely online environment (due to COVID-19) I created computer-based exams to be delivered via the course management system, as well as administering, and proctoring exams*.

**Course: ANAT D-502, Basic Histology**
Institution: Indiana University School of Medicine (IUSM)
Format: Lecture & Laboratory
Role: Associate Instructor

Term: Fall 2018

Enrollment: 30
TBL contact hours: 3
Laboratory contact hours: 35
Role: *Associate Instructor (Course director: J. Byram, PhD) I facilitated one TBL session, as well as provided 35 hours of hands-on microscopy laboratory instruction, and assisted in grading practical exams.*

**UNDERGRADUATE COURSES**

**Course: BIOL-N 461 Cadaveric Human Anatomy**
Institution: Indiana University School of Medicine (IUSM)
Format: Laboratory & Case-based learning
Role: Associate Instructor

Term: Spring 2020

Enrollment: 35
CBL contact hours: 15
Laboratory contact hours: 40
Role: *Associate instructor (Course directors: J. Byram, PhD; J. Organ, PhD; M. Yard). I developed and implemented a course initiative via reflections and group work titled "First Patient Project" with the goal of integrating pathology and*

*anatomy, to facilitate empathy and an appreciation for the donors lived experience. In addition, I assisted in hands on dissection instruction to include dissections of tissues using autopsy techniques to provide a more thoroughly demonstration of pathologic change.*

**INVITED PRESENTATIONS IN TEACHING**

**INTERNATIONAL**
"Quality in Qualitative Research in Anatomy: An introductory workshop"
International Federation of Associations of Anatomists
December 2, 2020

## PUBLICATIONS

**PUBLICATIONS IN TEACHING**

**REFEREED PUBLICATIONS IN TEACHING**

2021 Byram JN, **Robertson KA**, Dilly CK. I am an Educator: Evaluating the Influence of a Clinician-Educator Training Pathway on Professional Identity Formation. Teaching and Learning in Medicine. https://doi.org/10.1018/10401334.2021.1952077

**NONREFEREED PUBLICATIONS IN TEACHING**

**ELECTRONIC MEDIA**

2020 Neurosurgical Atlas of Neuroanatomy
Contributed to content on an open-source atlas
https://www.neurosurgicalatlas.com/neuroanatomy

**TEXTBOOK CHAPTERS IN TEACHING**

2021 Herriott HL, **Robertson KA,** Noblitt B. Cervical (Neck) Local Anesthesia Techniques. Ferneini EM, Goupil M, McNulty MA, Eds. In: Applied Head and Neck Anatomy for the Facial Cosmetic Surgeon. *Role: I, along with Herriot HL, wrote the basic anatomy sections of the chapter.*

**CONFERNECE PRESENTATIONS IN TEACHING**

2022 **Robertson KA**, Byram JN. Experiences of Residency Program Directors during the COVID-19 Pandemic. Central Group on Educational Affairs Spring Meeting, Virtual. Platform Presentation.

2022 **Robertson KA**, Agosto ER., Hoffman LA., Deane AS., Byram JN., Students' Perception of the Anatomy Educational Environment at Regional Medical Campuses (RMC) and Main Campus. American Association for Anatomist at Experimental Biology, Philadelphia, PA. Poster Presentation.

2022 **Robertson KA,** Byram JN. Life-Long Learning of Leonardo da Vinci: Exploration of Cardiovascular Anatomy. American Association for Anatomist at Experimental Biology, Philadelphia, PA. Poster Presentation.

2021 **Robertson KA,** Byram JN. Peer Evaluation in a Team Based Learning Curriculum: Investigating the Utility of a Formative Assessment. E.C. Moore Symposium on Excellence in Teaching, Indiana University Purdue University (IUPUI), Indianapolis, IN. Concurrent Session

2021 Byram JN, **Robertson KA.** Development and Validation of a Peer Evaluation Tool for Team Based Learning. American Association for Anatomist at Experimental Biology, virtual. Platform Presentation.

2021 **Robertson KA**, Byram JN. First Patient: Reflections of Pathology and the Donor-Dissection Experience. American Association for Anatomist at Experimental Biology, virtual. Platform Presentation.

2020 Byram JN, **Robertson KA**, Dilly CK. Using a Social Cognitive Career Theory to Understand the Development of Educator Identity in Clinician Educator Trainees. Central Group on Educational Affairs Spring Meeting Rapid City, SD. Platform Presentation. (Meeting cancelled due to COVID-19 pandemic).

2020 **Robertson KA.** Byram JN, Peer-evaluation in a Team-Based Learning Curriculum: Investigating the relationship between peer-evaluation scores and team rank. American Association for Anatomist at Experimental Biology, San Diego, CA. Poster Presentation (Meeting cancelled due to COVID-19 pandemic).

2019 Byram JN, **Robertson KA,** Dilly CK. A snapshot of an educator in training: Motivation, career aspirations, and identity. Central Group on Educational Affairs Spring Meeting, Grand Rapids, MI, USA. Poster Presentation Program: https://www.aamc.org/download/495792/data/2019detailedprogram.pdf

**MENTORING:**

| **Individual** | **Role** | **Inclusive Dates** |
|---|---|---|

| | | |
|---|---|---|
| Pathologists' Assistant Students | Extra study sessions and lab reviews (in addition to regular course sessions) | Fall, spring, summer, yearly 2015 to 2019 |
| Medical Students (individual and small group) | Study, review sessions and review of laboratory sessions missed | Fall 2015-2019 |

**SERVICE:**

UNIVERSITY SERVICE:

| **Activity** | **Role** | **Inclusive Dates** |
|---|---|---|
| Statewide Pathology Educators Curriculum Meeting | Provide instruction on the use of virtual histopathologic slides as well as other specimen resources | 2015 to 2019 |

DEPARTMENT: Pathology and Laboratory Medicine

| **Activity** | **Role** | **Inclusive Dates** |
|---|---|---|
| PA Program Admissions Committee | For individual PA applicant interviews, provide tour of classroom and clinical sites. Participate in faculty interview for each applicant. ~3 hrs/applicant Skype with non-Indiana resident applicants ~30 min/applicant | 2015 to 2019 |
| Recruitment for PA Program | Host shadowing sessions for a select group of competitive applicants. ~ 2 hrs/applicant | 2015 to 2019 |
| PA Advisory Committee | Member, 1-2 one-hr meetings/yr | 2015 to 2019 |

**PROFFESIONAL SERVICE TO THE COMMUNITY**

| **Activity** | **Role** | **Inclusive Dates** |
|---|---|---|
| | | February 2018 |

| | | |
|---|---|---|
| Science Fair Judging<br>Newby Elementary School | Assisted in the judging of science fair projects at a local elementary school. The students were predominantly $5^{th}$ and $6^{th}$ graders. | |
| Camp MD and Dr. Camp | Discuss with middle school and high school students the effects of diabetes on the human body using the aid of plastinated organs | Summer 2017 |
| Newby Elementary School | Students visit the Pathology Department as a reward for science fair projects. We demonstrate different pathology entities using formalin tissues, plastinated organs and X-rays | Summer 2015 |
| Celebrate Science Indiana | Assisted at the Department of Anatomy, Cell Biology & Physiology booth, to demonstrate skeletal and other anatomy related items. | October 2019 |