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# Physician Burnout: A Healthcare Crisis

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# Physician Burnout: A Healthcare Crisis

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**Abstract**

In recent years, burnout has been cited as a contributing factor impacting physicians' health and the quality of health care in the United States. This paper examines causal factors, manifestations of burnout, and programmatic interventions to mitigate the effects of burnout. Mindfulness is emphasized as one approach to consider to reduce burnout and improve wellness in general. Final recommendations include two different attacks. First, a wellness based orientation is proposed as a preventative measure for residents during their intern year. Additionally, a long-term approach for all faculty and students is proposed. The intention is to create a multidisciplinary mental health support team for year round intervention support.

## Executive Summary

Burnout, an occupational stress related phenomenon, is manifested by three dimensions; emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment (Maslach, Shaufeli, & Leiter, 2001). Consequences of workplace burnout are significant and include absenteeism, personnel turnover, decreased job satisfaction (Maslach, Jackson, & Leiter, 1998), increased risk for substance use (Crum, Muntaner, C., Eaton, & Anthony, 1995), and increased risk for anxiety and depression (Iacovides, Fountouladis, Kaprinas, St. & Kaprinis, G., 2003). Burnout is most often experienced by those employed in the helping professions" such as teachers, social workers, physicians and other healthcare workers (Shanafelt, 2015).

National professional organizations such as the Accreditation Council of Graduate Medical Education (ACGME) and the National Academy of Medicine (NAM) have created policy to reduce risk for burnout. In addition, health care institutions have implemented policy and developed programs to address burnout. Oregon Health & Science University, the University of Texas Health Science Center, the Mayo Clinic, and the University of Wisconsin-Madison have developed curricula and programs utilizing Mindfulness Based Stress Reduction (MBSR), a stress management approach originally developed by Jon Kabat-Zinn at the University of Massachusetts Medical Center (Kelly, 2008).

This honors project begins with a review of the literature regarding burnout and its impact on physician health and health care quality. A non-experimental study was then conducted to further examine burnout at a mid-size acute care medical facility.

The study sought to answer the following research questions:

1. Do medical residents report manifestations of burnout?
2. What is the perception of medical residents regarding workplace measures to address burnout?
3. Are medical residents satisfied with their personal and work life balance?

The Burnout Inventory, adapted from the *Maslach Burnout Inventory* (CITATION), the gold standard instrument to measure manifestations of burnout, was administered to a non-probability sample of medical residents. Descriptive statistics were used to report the findings. Recommendations are made to reduce risk for burnout in medical resident training programs.

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# Chapter 1

## Introduction

Burnout, an occupational stress related phenomenon, is manifested along three dimensions; exhaustion, depersonalization, and a reduced sense of personal accomplishment (Maslach, Shaufeli, & Leiter, 2001). Exhaustion reflects feelings of being physical and emotionally drained, having little to no energy, and fatigue. Detachment and alienation from work place colleagues and activities results in feelings of depersonalization within the workplace environment. Diminished capacity to perform work place tasks results in a reduced sense of personal accomplishment. Maslach and his colleagues (2001) identify the roots of burnout as originating in the social relationships that develop in professions such as social work, teaching, nursing and medicine between the "helper" and the recipient of the help. Studies report that burnout occurs in many professions, however among medical residents and practicing physicians the prevalence is higher than in other professions (McCray, 2008; Shanafelt, 2015).

Risk for burnout increases under conditions of escalating job demands, diminished individual coping capacity, and limited resources to manage work-related stress (Bakker & Demerouti, 2016). Consequences of burnout are significant and include absenteeism, employee turnover, decreased job satisfaction (Maslach, Jackson, & Leiter, 1998), increased risk for substance use (Crum, Muntaner, C., Eaton, & Anthony, 1995), and increased risk for anxiety and depression (Iacovides, Fountouladis, Kaprinas, St. & Kaprinis, G., 2003). Additionally, the risk for suicide is more than double among physician populations in comparison to the general

population, with female physicians being at a greater risk than males (Schernhammer & Colditz, 2004).

While occupational burnout is common, particularly among health care workers, little systematic attention to this phenomena has been paid to in the work setting. However, recently attention within graduate medical education settings is growing. In 2015, the accreditation Council of Graduate Medical Education (ACGME) sponsored a 2 day *Symposium on Physician Wellbeing* at which medical professionals and wellness experts engaged in discussions around issues of burnout, physician wellbeing, and change needed to transform the training and work place conditions for physicians (para 1). Additionally, the National Academy of Medicine (NAM) has established a collaborative mechanism among multiple organizations to support and improve physician well-being and resilience (2017). This collaboration was created to better understand what causes health professionals to be so profoundly impacted by burnout and to develop evidence-based solutions to this phenomenon.

This honors thesis examines causal factors, manifestations of burnout, and programmatic interventions to mitigate the effects of burnout. Mindfulness is emphasized as one approach to consider to reduce burnout and improve physical and mental wellness. Recommendations are made for system level program development and measures individuals can use to reduce risk.

# Chapter 2

# Literature Review

## Theoretical Frameworks

Demerouti and her colleagues (2001) propose the JD-R framework to better understand occupational stress and the potential for burnout. The JD-R Model can be applied to any occupational setting with the acknowledgement that the demands present and resources available will vary in different work settings. Workplace stress is derived from external factors (demands) that have the potential to disrupt equilibrium. Resources have the potential to mediate the negative impact of demands. Using the JD-R model, chronic workplace demands lead to extreme exhaustion and under conditions of limited resources the individual struggles to meet the job demands which then prompts him or her to become disengaged from workplace activities and responsibilities.

According to Demerouti (2001) burnout syndrome is a product of a "constellation of working conditions" (p.508). A positive correlation between conditions of high demand and exhaustion and a negative correlation between low resources and disengagement is reported. Therefore, when an occupation has a combination of high demand and low resources, there is a significant opportunity for manifestations of burnout to develop. These findings specifically illustrate that the root causes of burnout originate from high levels of work place demands in concert with low levels of work place supports.

Meijman and Mulder (1998) describe demands as physical, psychological, social or organizational conditions that while not always negative do result in some sort of physical or

psychological cost. Resources are described as rooted in an array of job aspects including physical, psychological, social or organizational factors (Meijman and Mulder, 1998).

The Conservation of Resources (COR) theoretical framework developed by Hobfoll (as cited in Xanthopoulou et al, 2007) further supports the link between burnout and resources. This framework identifies two inherent assumptions: a) employees like to build up an arsenal of resources and b) employees use these resources to mediate threatening or negative experiences at work. These resources have the potential to either accumulate or become completely depleted, in which case the employee is left with nothing to protect themselves against the effects of negative workplace experiences.

As noted previously, those experiencing burnout report physical and emotion exhaustion and depersonalization or disengagement from the workplace. To the contrary, workplace engagement is described as a multifaceted concept manifested as vigor, dedication and absorption in workplace activities (Gonzalez-Roma, 2006). Employees with vigor are open to investing their time and effort into the workplace, and are resilient and persistent even in the face of adversity or difficulty at work. Dedicated employees possess a feeling of pride, enthusiasm and inspiration in the workplace. Absorbed employees are fully engaged in the work and have a positive attitude about the workplace environment. Consistent with the JD-R framework, work place resources may be employed to promote engagement characteristics to mediate the negative impact of burnout.

**Burnout – Psychological Phenomenon**

In 1974, Freudenberger, a clinical psychologist, was the first to label stress related characteristics observed in the work place as 'burn-out' (Freudenberger, 1980). He wrote about the consequences of work place stress observed most frequently among health care professionals.

Experiences of stress associated in the workplace can be objectively evaluated by measuring salivary cortisol levels. Higher levels of cortisol are secreted during periods of stress (Grossi et al, 2005; Belligrath et al, 2008). Bellingrath and colleagues also expresses concern for the added physiological impact of cortisol on physical health status.

Cortisol is involved in the body's natural stress response, and can be beneficial when someone is experiencing a real life threatening situation, initiating the fight or flight mechanism. However, when this natural response system is constantly turned on and releasing cortisol due to the chronic stress response initiated by the work environment, adverse health can ensue. The Mayo Clinic (2016) reports that the long-term activation of the stress response can result in heart disease, concentration impairment, depression, and anxiety.

Since Fruedenberger, the description of this phenomenon has evolved and interest in exploring the concept has grown exponentially. An early meta-analysis of 100 publications on burnout among the helping professions reported consequences to be far-reaching (Kahill, 1988). Negative outcomes of burnout included depression, sleep disturbances, problematic interpersonal relationship with colleagues, clients, family and friends, and diminished job satisfaction.

**Depression**. Depression is frequently reported by those who experience burnout. Studies have been conducted to further delineate this relationship. Shin and colleagues (2013) conducted a longitudinal study of burnout among Chinese schoolteachers. Teachers who reported burnout were more likely to develop depression at a later time, but that depression did not predict the development of burnout. Ahola & Hakanen (2007) report the same relationship, stating that, "even though the relationship between burnout and depression is reciprocal, the path from burnout to depression appears to be stronger than the path from depression to burnout" (p. 109).

Bianchi & colleagues (2016) studied burnout in New Zealand school teachers and reported that all subjects who exhibited high frequency of burnout symptoms also met the criteria for depression. Burnout was also associated with "dysfunctional attitudes, ruminative responses, and pessimistic attributions" (p. 1). In addition, 36% of participants who exhibited burnout symptoms also reported suicidal ideation. Bianchi's work demonstrates the severity of the burnout phenomenon.

Schonfeld & Bianchi (2015) in his examination of burnout in school teachers reports similar findings to those of Bianchi. Burnout and depression co-varied and were positively correlated with three different stress categories examined: stressful life events, job adversity and the lack of workplace support. In this study, 86% of subjects identified as experiencing burnout also met the criteria for a provisional depression diagnosis. Given that depression is nearly universally observed in those who report burnout, researchers propose that methods used to treat depression may also be effective in treating burnout and methods found to help with burnout may also help mitigate feelings of depression.

**Sleep disturbance.** Sleep disturbance is another common symptom of burnout and results in feelings of exhaustion during the day (Melamed et al, 1999). Stress, as measured by salivary cortisol, was also higher in those employees with burnout. These authors suggest that increased salivary cortisol levels could also explain the emerging relation between the burnout experience and risk of cardiovascular disease.

The effects of sleep disruption among workers experiencing burnout persist. Ekstedt and colleagues (2006) objectively measured sleep disturbance using polysomnographic recordings. Sleepiness and other mental fatigue characteristics were measured the following week. Subjects experiencing burnout also experienced less REM and slow wave sleep, more wake time, and more arousals during the night in comparison to their low-level burnout counterparts.

To further examine the relationship between burnout and sleep disturbance, Armon and colleagues (2008) conducted a longitudinal study of 1,356 healthy employees. A moderate association was found between the two at T1. However at an 18 month follow up burnout at T1 was a significant predictor of new onset insomnia at T2 and insomnia at T1 predicted new onset burnout at T2. In addition, insomnia reported at T1 was associated with a higher intensity of burnout at T2. The author related exhaustion due to poor sleep quality in combination with a high stress workplace as the culprit for either exacerbating current cases of burnout or creating new ones.

**Physician Populations – Heightened Risks**

A recent commentary on the perils of physician stress was published by the New England Journal of Medicine (NEJM) published a commentary titled *Kathryn* (Muller, 2017). The

piece reflects on the suicide of a fourth year medical student who was studying at the Icahn School of Medicine at Mount Sinai, New York. On August 17th 2016, Kathryn jumped out of her apartment window, taking her own life. A group of surgical residents walked by her minutes afterwards as they were headed to the hospital for morning rounds. They immediately tried to save her, but ultimately they were unsuccessful. This event provoked institutional attention to the serious issue of stress among medical residents. Emergency mental health services were put into place and town hall style meetings were held to give students a platform to voice their feelings. However, regardless of the anger, guilt, frustration and sadness that gripped the school after Kathryn's death, Dr. Muller reflects in the article that it is going to take a collaborative effort to change a culture that pushes students, trainees and doctors alike to hide from these challenges.

It has been widely reported that prevalence of depression and suicide ideation as well rates of completed suicide are greater among medical students and practicing physicians than the general population for which depressive symptoms are reported in 9.3% of those age 18-24 and 7.2% of those aged 26 – 49 (Hedden, 2015). Zisook and colleagues (2015) studied depression and suicide ideology among medical students, house staff and faculty. Thirty-five percent of the medical students reported mild depression, 17% reported moderate depression, and 3.6% reported severe depression. 8.7% of the medical students reported thoughts consistent with self-harm. Schernhammer and Colditz (2004) completed a meta-analysis of research on physician suicide. The authors report that compared to non-physicians, the suicide rate among male physicians is 1.41 times greater and the suicide rate among female physicians is 2.27 times greater.

Drybye and colleagues (2008) studied the relationship between suicide ideation and burnout among 4, 287 students enrolled in 7 medical schools. Burnout, quality of life, depression, and suicide ideology over the past year were measured at baseline (T1). At baseline, burnout was reported by 49.6% of students and 11.2% reported suicidal ideation over the past year. Suicide ideology was assessed again 1 year later (T2). Students who reported burnout or depression at T1 were more likely to report suicide ideology at T2. At T2, 26.8% of respondents no longer met the criteria for burnout and also reported less suicide ideation suggesting that recovery from burnout decreases suicide risk.

Acknowledging that suicide is a disproportionate cause of death among physicians, Shanafelt and others (2011) studied suicide ideology and the use of mental health services among surgeons. 6.3% of the study sample reported suicide ideation during the previous year. For those over the age of 45, suicide ideation was 1.5 – 3 times that reported in the general population. In addition, suicide ideation demonstrated a large positive association with each domain of burnout. For those with recent suicide ideation, only 26% had sought mental health counseling or psychiatric help. 60% of those with suicide ideation report reluctance to seek help due to concerns that it would affect their medical licensure.

Similar findings regarding depression prevalence among medical students and reluctance to seek mental health treatment has been reported (Rotenstein et al, 2016). In this meta-analysis, prevalence of depression in medical students is reported to be 27.2% and suicide ideation to be 11.1%. Only 15.7 of those with depression had sought mental health services.

Surgeons who are depressed and experience symptoms of burnout are more likely to abuse alcohol (Oreskovich et al, 2012). Prevalence of alcohol abuse for male surgeons was

13.9% and for female surgeons 25.6%. In addition, surgeons reporting a major medical error in the previous 3 months were more likely to have alcohol abuse or dependence.

Risk for burnout begins early in the years, peaks at the mid-point, and remain high through the remaining years of medical training (Pantaleoni et al, 2014). These authors documented a significant increase in the dimensions of burnout among pediatric residents between the start of residency and mid-year 1. These increases through the year 2 and year 3 of residency training. Burnout prevalence increased from 17% start of year 1 to 46% at mid-year 1.

All medical specialists are prone to burnout, however some may be at greater risk than others. Emergency medicine specialists are reported to be at highest risk with rates of approximately 65%, followed by general internal medicine, neurology and family medicine practitioners. The lowest reports rates (30%) of burnout are reported among those practicing in preventative medicine such as occupational or environmental medicine (Shanafeltet al, 2012).

**Workplace Protections**

**Shift and time-off policy**. The largely debated issue of how to reduce fatigue, one manifestation of burn-out, in medical residents is nothing new. For decades, the Accreditation Council of Graduate Medical Education (ACGME) has attempted to control the adverse effects of fatigue among residents through policy. The ACGME (n.d.) summarizes efforts to establish shift requirements on their web site page *Clinical Experience and Education*. In February 1988, the organization recommended the following work place hour and shift standards:

1) one day in seven away from the hospital;
2) on-call duty in the hospital no more frequently than every third night;
3) adequate backup if sudden and unexpected patient care needs create resident fatigue sufficient to jeopardize patient care; and

4) institutional policies to ensure that all residents are adequately supervised, with reliable methods of communication between residents and supervising physicians (ACGME, n.d., para 3).

In July 1989, Internal Medicine was the first specialty to endorse the 80-hour workweek averaged over the course of 4 weeks. This was adopted by six other specialties by the early 1990's (ACGME, n.d.).

In 2001, the ACGME established a work group on *Resident Duty Hours and the Learning Environment*. This group was charged with the task of creating a common requirement while also keeping in mind that certain programs such as emergency medicine and anesthesiology might need special flexibility to ensure that patient safety remained a priority (ACGME, n.d.)

In July 2011, in accordance with the Institute of Medicine's 2008 recommendation, the ACGME limited duty hours to 80 hours per week averaged over a four week period, to include all in-house call activities and all moonlighting. All residents are to have 1 day per week free of duty. First year residents may work no more than 16 consecutive hours; all other residents may work no more than 24 consecutive hours. However, a provision exists that allows residents to remain at work for an additional 4 hours to finish up their work (complete charting, reporting to next shift) thus in essence allowing for a maximum of 28 hours on duty. First year interns must have 8 hours free of duty between their shifts, while intermediate level residents should have 8 as well, with 14 hours off duty if they have just completed a 24 hour shift. Residents that are in their last years of training are expected to adapt to the irregular work hours as they soon will be practicing unsupervised. However, it is advised that when these shift rules have to be broken the program director closely monitors the situation (ACGME, n.d.)

**Professional organization wellness initiatives.** In addition to policy change such as the work hour considerations, the ACGME (n.d.) hosted the *2015 ACGME Symposium on Physician Well-Being.* Tim Brigham, Chief of Staff for the ACGME, and Thomas Nasca, CEO of the ACGME, described this meeting of health professionals as a time to start the conversation about physician well-being. The goal is to shift the current workplace culture that perpetuates the existence of burnout to one of acceptance and support.

In addition to the efforts of ACGME, the National Academy of Medicine unveiled in their January 2017 news issue that they have constructed a collaboration that is the first of its kind for the academy, an *Action Collaborative on Clinician Well-Being and Resilience*. The mission of this new group is to create a space with an aim to "1) assess and understand the underlying causes of clinician burnout and suicide, and 2) to advance solutions that reverse the trends in clinician stress, burnout, and suicide" (National Academy of Medicine, 2017, para 3).

The Clinical Learning Environment Review (CLER) Program, developed by the ACGME, is designed to provide teaching hospitals and other clinical settings with "periodic feedback that addresses the following six focus areas: patient safety; health care quality; care transitions; supervision; fatigue management and mitigation; and professionalism" (ACGME, n.d., para 2). Reviews are conducted every 18 – 24 months. Meetings are held across all medical disciplines and focus groups are conducted with residents, fellows and patients. The goal of the visit is to be provide feedback to the institution's executive leadership feedback on areas for improvement in the six competencies area to better prepare future physicians to effectively practice in modern medicine (ACGME, n.d.).

**Prevention and Intervention Recommendations**

There is little agreement on the most effective way to tackle burnout in the medical profession. However, organization psychologists such as Maslach and Leiter (1997) have conducted research on the risks, causes and impact of burnout. Potential areas to address when attempting to mitigate the effects of burnout include workload, control, balance between effort and reward, community, fairness and values (Jennings et al 2015). The following paragraphs detail Jennings' thinking on how to address burnout in the work-place environment.

Workload burdens involve the sheer volume of patients that must be managed and also the emotional feelings experienced when a patient is lost. Additionally, lack of documentation efficiency can cause increased workload, particularly when residents have not been trained to use charting software. Additional training may ease the stress associated with loss and time spent on documentation.

Regarding control, residents are given a significant amount of patient care responsibility but are often not given the same amount of decision-making ability surrounding the care. In order to combat this sense of lacking autonomy, it is important to incorporate effective communication and teamwork skill training into medical education to ensure that residents can actively participate as a valued member of the team, even if they may not be making the final decisions.

It has been reported that the balance between the workplace effort and costs and perceived reward is oftentimes unbalanced. The debt incurred during medical school is triple what it was two decades ago (Youngclaus & Fresne, 2013) causing financial stress among

practicing physicians. This issue could be addressed by offering financial services and professionals to help manage inevitable resident debt. Rewards also include workplace environments that have purpose and meaning. The cultivation of such environments is crucial so residents feel that their extensive effort is not going without notice.

Similar to the necessity of encouraging a space where teamwork and collaboration in decision-making are valued, nourishing a space where community is valued is critical in ensuring that mutual respect and appreciation exists in the learning environment. To make sure that this sense of community transcends through all disciplines it is suggested that programs offer training in interpersonal and conflict resolution skills. When this cohesive culture is lacking an increased risk for burnout exist due to the unsupportive and isolating nature of the environment.

Although certain decisions and judgment calls inevitably have to be made within training programs, when resident feel that they have been treated unfairly it can be detrimental to their wellness. Programs should prioritize transparency not only in their decision-making, but also how they choose to distribute resources. This also applies to any change in policies or procedures that residents are expected to participate in and adopt. Understanding the rationale behind the choices that the program makes needs to be prioritized so residents feel like they are a valued member of the medical team.

Moral distress can potentially occur when a resident is expected to participate in a care plan that may not align with their personal morals. This becomes a problem when residents are expected to follow orders from a professional of higher rank that they may not agree with. To ensure that this moral conflict is addressed, it is important that programs have a formal space

where residents' voices can be heard if they choose to voice their feedback or ethical concern about the work environment. Not only does this space need to exist, but if ethical concerns from residents arise, there needs to be a protocol in place for these to be addressed.

**Making Connections.** McKenna and colleagues (2016) describes the importance of connection in the medical community when attempting to build these resilient clinicians. The idea of social resilience is something that the medical environment offers a perfect platform to practice and benefit from. When there are mutual trust and bonding experiences among the group, there are collective efforts to support one another amid an individual experiencing an adverse event. Kathleen McKenna, MD, MPH reports that, "certain aspects of modern day medical training may actually be promoting disconnection among the medical community, disconnection being potentially one of the biggest threats to resident resiliency … " (p. 1197).

To reduce stress, McKenna advocates for work hour restrictions, use the electronic medical record, and an emphasis on work life balance. McKenna references Maslow's hierarchy of needs theory when making the point that having a sense of belonging is more important than self-actualization. McKenna reports that self-actualization is depicted by Maslow as "realizing one's potential, achieving peak goals, and finding self- fulfillment" (McKenna, 2016, p. 1198). Although these are all focuses that physicians in training strive for, the current structure of medical training does not allow for the foundational need of achieving a sense of belonging to first occur.

McKenna suggests that workplaces create protected time and space where residents can come together and share whatever it is they feel is most important in their lives. While structured education is important, these raw and organic connections amongst peers are

crucial to develop. Additionally, McKenna advises of the importance of not only peer-to-peer bonding, but also interdisciplinary connection being key to a wellness-oriented workplace. She recommends that in order to foster a care team of inclusiveness and respect group members might be given the opportunity to share a life story, or a unique characteristic, fear, or recent success about which other team members are unaware. This form of sharing has potential to lay the groundwork for even deeper connections and respect to flourish among care teams.

**Institutional Wellness Programs**

With a growing concern for the level of burnout experienced by medical professionals in the US, teaching hospitals and medical groups have attempted to implement curriculum that includes mindfulness and resiliency training to try to mitigate the phenomenon. These curricula are designed to teach residents coping, stress management and other strategies to manage stress, but more importantly prevent burnout.

***Resident and Faculty Wellness Program (RFWP)*, Oregon Health & Science University.** This program includes educational outreach and direct care components. In the education component, residents are informed of the referral process and care options that exist if they in need of mental health services. Additionally, there are wellness workshops and monthly resident support group luncheons conducted by the chief residents. This workshops and groups facilitate a sense of camaraderie and break down the hierarchical culture that adversely effects the overall wellness of the environment. Suicide prevention screening is also offered, followed by individual feedback of the results, and connection with the appropriate services if necessary.

A plethora of different counseling approaches are available, including cognitive behavioral therapy, brief insight oriented treatment, meditation and mindfulness practice.

Referral to community providers and assistance in medication management are also provided. A unique feature of all of this program is that the clinical records are specifically stored in an encrypted database that only clinicians associated with RFWP can access. This confidential system addresses concerns residents have about accessing mental health services for fear of jeopardizing their licensure. In addition, all program directors, faculty leaders and chief residents are trained to recognize signs of distress and burnout to ensure that they recognize the importance of early intervention for residents impacted by work load stress.

The results in the ten years since implementation are encouraging. In the first year of implementation only 5.2% of residents and fellows and 6 faculty members used the services provided by the program. However after 10 years in existence, 24.7% of residents and fellows were utilizing the RFWP services and 86 faculty members had also participated. One reported problem occurred when RFWP services were moved off site. It was reported that it was more difficult for participants to access the program, suggesting the significance of how much work schedules impact the capacity to break away for training. Considerations must be taken when deciding where services are housed, especially for residents. Review of the program are positive. 94% of residents report they received the desired services and 98% report they would recommend the RFWP to a director or colleague in need of similar help (Ey et al, 2013).

***Time Off Policy*, Oregon Health and Science University:** In an effort to accommodate one of the most frequently cited barriers of residents to seeking mental health services, difficulty getting time off, a time-off policy was implemented to ensure residents had protected time to dedicate to their physical and mental health. The policy grants residents four half days per academic year in order to pursue health and wellness measures. Twenty-four months after

implementation, 89% of the residents reported that they were familiar with the policy and 50% of that group reported using the time. Of those that chose not to use the policy, 42% of them reported that they felt concerned about the adverse effects of their absence on their peers. This latter concern indicates that in addition to a time-off policy, a culture of support and reassurance needs to be cultivated so that time-off can be taken without adversely impacting others on the healthcare team (Cedfelt et al, 2015).

***Legacy Clinic*, Legacy Health (Portland, Oregon).** This program was developed by a primary care group and includes three objectives: improve physician perception of control within the workplace, increase physician participation in identification of what supports and discourages their well-being; and regular assessment of physician well-being using previously validated instruments

Physicians control over their environment was enhanced in group meetings where concerns could be expressed and accommodations made for specific clinical interests of group members. To implement order into the workday, support staff were hired for more efficient care management to include the use electronic records. Additionally, meetings where emotional clinical cases were presented and openly discussed help to create meaning and enable the expression of loss.

Evaluation of the program revealed that provider efficacy improved, mental energy increased, and work related exhaustion decreased following implementation. These improvements not only create a healthier work culture, but the collateral impact of the program supports retention as well as recruitment of physicians. (Dunn et al, 2007)

***Stress Management and Resiliency Training (SMART) Program*, Mayo Clinic.** This program uses a neurobiological framework to explain the role of mind-brain interactions in stress management. The scientific underpinnings related to happiness, decision-making, and judgment are stressed. Additionally, an introduction *to Attention and Interpretation Theory* is included. The ultimate goal is for participants to achieve a mental state of focus and calm, while also engaging in the rational and meaningful interpretation of life's events (Mayo Clinic, n.d).

***Sacred Vocation Program (SVP)*, University of Texas Health Science Center.** The core of this program embodies the idea that in order to best nurture patients health care providers must also be nurtured. The program helps residents cultivate resilience and mitigate distress while experiencing support from their peers. Five 1-hour group sessions are conducted over a two week period. In Session 1, discussion about the practice of medicine as a sacred gift occurs. Session 2 touches on the power physicians have to heal, followed by session 3 on the power to also cause harm. Both of these sessions encourage personal story telling and reflection on times where residents have experienced these powers. Session 4 opens a platform for developing coping strategies, and residents are encouraged to lean on each other in terms of sharing personal strategies they have as well as brainstorm new tactics. In the concluding Session 5, residents are encouraged to look forward and identify principles to guide their future practice.

More than 300 residents have participated in this program. Feedback has been positive, and many cite how they appreciate the creation of a nonjudgmental space. Additionally, participants voice an appreciation for the camaraderie developed over the two week program. One of the most positive outcomes is the gratitude participants express for the sense of

renewal gained from the program. The demands of medical training sometimes make it difficult to keep the passion of medicine alive. Because of this, it is important to nourish these passions because as reported from those participating in SVP, appreciation of medicine as a practice can help mitigate the feelings of burnout (Villarreal, 2016).

***Madison Health Mindfulness Program*, University of Wisconsin-Madison**. This program includes activities such as "mindfulness meditation practices, gentle stretching, mindful gentle yoga, inquiry and application into experiences of daily living, group dialogue, home assignments, and audio recordings" (UW Health, 2017, para 2). This program's intends to address daily challenges such as stress and illness and ultimately reduce the stress and create a more balanced life (UW Health, 2017).

**Self-Care Approaches**

In response to the NEJM's article titled *Kathryn,* a story about a medical resident's suicide, Dr. Hill shared his story about his own journey of burnout; a journey plagued with alcoholism, depression and suicidal ideation. He reflects on the days where he needed a handful of drinks just to fall asleep at night, but also reflects on the grand rounds lecture he delivered to over 200 of his colleagues where he openly spoke of his journey from struggle to recovery. After the lecture, hundreds Hill's colleagues and peers sent emails sharing their own experiences. A medical lecture was now a human connection.

Hill reminds us that before physicians can take care of others it is imperative that they take care of themselves. He credits various forms of self-help approaches including counseling, meditation and mindfulness activities, deep breathing, exercise and hot showers as instrumental in his healing. Hill leaves us with the following observation: if "We go on doing

things the same way we always have, somehow expecting different results – one definition of insanity. It is way past time for a change (sic)" (Hill, 2017, p. 1105). The responsibility of caring for patients and the emotional and physical toll that may ensue cannot be changed. However, what can be changed is how medical professionals are taught to care for patients, and more importantly themselves.

**Mindfulness Based Stress Reduction (MBSR)**. In 1979, Dr. Jon Kabat-Zinn founded the *Mindfulness Based Stress Reduction Clinic* at the University of Massachusetts Medical Center. MSBR practice incorporates elements of meditation and yoga, and while its roots hark to Buddhism tradition today it is practiced within a secular environment. (Kelly, 2008). Mindfulness is the core element in MBSR practice. According to Kabat-Zinn (2005), 'Mindfulness means paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally' (p. 4). Practitioners pay attention to/are aware of their feelings, sensations, and thoughts at the moment. Consciousness is a related central theme. Practitioners recognized feelings and thoughts within themselves and non-judgementally label these. Feelings and thoughts are not ignored, judged, or reacted to. They are accepted for what they are. Decentering is another term used to describe one's ability to take a present-focus and non-judgmental view to thoughts and feelings; to evaluate these as temporary and objective events that are not to be dwelled upon (Feldman, Greeson, & Senville, (2010). Mindfulness practice counters habits of obsessing and ruminating on negative feelings and thoughts common to the clinical and behavioural manifestations (depression, anxiety, and substance use) reported in burnout.

Kabat-Zinn (2011) describes the University of Massachusetts program as a healing program; one less interested in curing emotional distress. Medical professionals undergo years of training with a primary focus on curing disease and fixing things, but the reality is that not everyone or everything can be fixed. MBSR can be instrumental in aiding the 'helping profession' come to terms with the fact that sometimes all one can do is come to terms with the way things are.

Research has demonstrated that MBSR practice is effective in reducing stress and negative emotions (Birnie, 2010; Shapiro, 2005); universal features of burnout. These authors also report gains in self-empathy and self-compassion, perspectives important to combat feelings of depersonalization and reduced accomplishment experienced with burnout. In addition, mindful breathing has demonstrated effective in reducing biochemical markers associated with stress, inflammation, anxiety and depression (Twal, 2016). These biological findings further support that something that may seem as mindless as breathing has the potential to create impactful change both physically and mentally.

**Progressive Muscle Relaxation (PMR)**. Progressive muscle relaxation (PMR) as another mindful measure that has proven effective in managing stress. PMR is a relaxation technique that involves the purposeful tensing and relaxing of muscle groups. One focuses on the associated feelings of tensed muscles and relaxed muscles. With practice, one can induce muscular relaxation when feelings of anxiety or stress arise (Richmond, n.d.) PMR has demonstrated beneficial physical and psychological effects, similar to those observed in mindful

breathing (Pawlow, 2002). PMR takes little time and can be practiced within the worksite thus it holds promises as a stress management approach for busy medical practitioners.

**Visualization/Guided Imagery.** Visualization or imagery may be incorporated into the practice of PMR, or used independently to manage stress. Apóstolo & Kolcaba (2009) studied the benefits of guided imagery by looking at a sample of inpatients with depressive disorders. Researchers report that intervention subjects experienced "decreased feelings of depression, anxiety, and stress while increasing personal perception of comfort" (p. 409). These findings support previously found results from a sample of healthy adults, those receiving guided imagery meditation instruction experiencing decreased depressed mood and fatigue. These decreased levels remained 7 weeks post intervention (McKinney et al, 1997). Research has demonstrated that guided imagery reduced stress as measured by salivary cortisol (Watanabe et al, 2006).

# Chapter 3

# Methods

The study sought to answer the following research questions:

1. Do medical residents report manifestations of burnout?
2. What is the perception of medical residents regarding workplace measures to address burnout?
3. Are medical residents satisfied with their personal and work life balance?

## Design

The design was descriptive, non-experimental.

## Study Sample and Sampling procedures

This was a non-probability sample of medical residents employed at a mid-size acute care medical facility. To protect the identity of those eligible for participation, the institution's Graduate Medical Education Office distributed the survey blindly to all employed residents currently. A total of 572 residents were invited to participate in the research; the final sample was comprised of 59 residents, representing a 10.3% response rate.

## Measures and Procedures

Research instruments were distributed via an electronic survey application. Demographic information was sought and then the Burnout Inventory was completed. The Burnout Inventory is a 33 item self-report, rating scale modification of the Maslach Burnout Inventory (Maslach, 1997). Seven subscales are included**:**

**Exhaustion.** Exhaustion was measured with 3 questions using a 3-response rating. Responses on the scale ranged from a 1 which indicated never experiencing the perception, to

a 3 which indicated experiencing the perception more than 3 times. Total subscale scores range from a 3 to a 9.

**Depersonalization.** Depersonalization was measured in two ways; four question with a 4-response rating and one question with a 2-item binary response. Total subscale scores range from a 4 to a 19. The two yes/no response questions were as follows:

a) *Would you recommend the medical profession to someone considering that career?*

b) *If you could go back to your undergraduate studies, would you still choose to become a doctor?*

**Work Place Support.** This was measured with 5 questions using a 5 response rating scale. Responses on the scale ranged from a 1 (Never) to a 5 (always). Total subscale scores range from a 5 to a 25.

Work Life & Personal Life Balance: This was measured using a 10 response rating scale. Response on the scale ranged from a 1 (not at all) to a 10 (definitely). Two questions were included. Total subscale scores range from a 2 to a 10.

**Burnout Prevalence – Perception.** This was measured by asking respondents the following two yes or no questions:

a) *Do you think that you have experienced burnout?*

b) *Do you think some of your colleagues experience burnout?*

**Exposure to Burnout Information.** This was measured asking respondents the following two yes or no questions:

a) *Have you been exposed to information about burnout?*

b) *Would you like to have more exposure to information about burnout and preventative measures to take in regards to its effects?*

**Open-ended Responses:** After completing the rating scales, respondents were provided the opportunity to respond to two open ended questions.

a) *Overall, what aspect of your program do you think causes you the most stress?*

b) *What do you think is the most effective way for the institution to mitigate burnout?*

**Analysis**:

Descriptive statistics were employed to report the research findings

# Chapter 4

# Results

## Demographics

Respondents were comprised of 40 female and 19 male subjects. The training year of subjects ranged from post-grad year (PGY) 1 to post-grad year (PGY) 5, with the majority of respondents identifying as PGY1. Out of the 20 specialties that the institution offers, 15 of them were represented. The top five most represented specialties were emergency, psychiatry, surgery, internal medicine and anesthesia. Reported work hours for this sample ranged from a low of 40 hours worked per week to 100 hours.

## Burnout

Exhaustion: Total scores ranged from a 3 (low exhaustion) to 9 (high exhaustion). The mean response was a 5.37.

Depersonalization**:** Total scores ranged from a 6 (low levels of depersonalization) to 18 (high levels of depersonalization). The mean depersonalization score was 14.3. Respondents were also asked the following two questions:

a) *Would you recommend the medical profession to someone considering that career?*

37 (63%) reported “yes”.

b) *If you could go back to your undergraduate studies, would you still choose to become a doctor?* 47 (80%) respondents reported “yes”.

Work Place Support**:** Total scores ranged from 6 (low levels of perceived support) to 25 (high levels of perceived support). The mean perceived support score was 16.9.

Work Life & Personal Life Balance**:** Total scores ranged from 2 (low levels of balance) to 8 (high levels of balance). The mean work life/personal life balances score was 5.6.

Perceptions - Burnout Prevalence**:** 34 (58%) respondents report that they have personally experienced burnout. 56 (95%) of respondents report that they believe their colleagues have experienced burnout.

Exposure to Burnout Information: 48 (81%) subjects report that information about burnout was available in the workplace; mostly through written materials. Many (53%) would like more information about burnout and preventative measures to take in regards to its effects.

Open Ended Questions**:**

a) Workplace Stressors: The top 3 workplace stressors were concerns regarding hours and scheduling, documentation and the workplace culture. Specific responses surrounding scheduling concern included “High intensity shifts that are understaffed” and “Long hours with unrealistic expectations”. Concerning documentation, specific responses included “Confusion over the computer systems” and “stress from secretarial staff about documentation”. Responses from subjects surrounding the workplace culture included: “negative relationship with attending”, “communication failure”, “trying not to appear weak”, and “notoriously toxic rotations”.

b) Burnout Prevention & Mitigation: The top four responses were to increase the number of residents hired, adhere to work hour regulations, to improve the work place culture, and to have the opportunity to consult with mental health professionals. Regarding the workplace culture, respondents stated that they would like to see “kinder colleagues, more teamwork rather than us vs. them mentality”, “having attending physicians more aligned on

common expectations of residents", as well as various comments about creating a space that prioritizes supportive colleagues and culture.

# Chapter 5

## Discussion and Limitations

Referring to the Jobs-Demand Resource theoretical model, it has been proposed that resources are the most significant protective factor to mitigating the negative impacts arise from a high demand work environment (Huang, Wang & You, 2015). This importance of resources surfaced among residents' responses when they illustrated a desire to have more support places in the workplace as they report these would help mitigate the negative aspects of the workplace environment. When questioned about work place support directly, a wide range of responses were reported. Some residents did not feel supported at all while others reported the opposite. However, one of the most highly cited suggestions for institutional change was an effort to create a more supportive work environment.

Respondents were also asked when they felt their feelings of burnout were strongest, and results revealed a wide range of answers. The responses spanned different training years, different shifts, and different patient care responsibilities. This demonstrates that burnout is a unique experience for everyone, and support efforts need to be in place and taken seriously during all parts of medical training and eventual practice.

An interesting discrepancy was noted between burn-out in self and perceived burnout in colleagues. Approximately 50% of residents' self-identified that they have experienced burnout; however it was an almost unanimous conclusion that respondents believed their colleagues experienced burnout. The ability to recognize burnout in others, while not recognizing burnout in themselves, potentially supports the conclusion that many residents

refuse to intrinsically recognize the signs, as they are worried about professional repercussions. This finding supports the need for educating the residents about the potential severity of burnout, in conjunction with creating an atmosphere where discussion of burnout can occur.

Exhaustion scores reported ranged from 3 (low exhaustion) to 9 (high exhaustion). The mean exhaustion score was 5.37, falling in the middle range of potential scores. This finding was expected to be higher as other authors have reported exhaustion to be a primary concern with burnout.

The mean depersonalization score was 14.3, falling in the upper middle third of potential scores. Again, it was expected that medical residents would report higher rates of depersonalization.

The implication of these findings suggest that programmatic intervention needs to be rooted strongly in creating a more supportive work environment between peers, faculty and administration. The self-identified prevalence of burnout among subjects, as well as the perceived prevalence among their colleagues along with the exhaustion and lack of support in the workplace, demonstrates the need for intervention measures to be developed before burnout becomes more prevalent.

**Limitations**

There were several limitations in this research. Generalization of these findings to other resident groups is not possible due to the small sample size. Additionally, due to the sensitive nature of the content and potential concerns with confidentiality, survey responses may be biased; for example, minimizing the report of burnout. Finally, the instrument used, while modified from a standard burnout instrument, was not evaluated for validity and thus the

findings may not represent the extent to which burnout was experienced by this study sample or if burnout and not some other variable is represented.

# Chapter 6

## Recommendations

It is clear that the experience of burnout by physicians cannot be solved by one policy or one program alone. This phenomenon has been derived from a culture of heroism, dedication, and relentless hard work that has been established over decades of practice. In order to put an end to burnout, a cultural change needs to be implemented. Change will not be easy, however, effective institutional programmatic interventions exist and self-help strategies can be adopted.

Buy-in from staff members of all disciplines and training levels is paramount in initiating cultural change. Because of this it is important to intervene early on in the training of physicians. The first year of the residency program, often referred to as the intern year, is when residents should first be introduced to stress management techniques. It is also the time when institutions must begin to intervene at the system level to reduce risk for burnout.

This chapter concludes with recommendations for a comprehensive wellness program to be considered for adoption at the institution at which this study took place. Similar to some of the programs that have been implemented at other institutions, a first year wellness orientation workshop is proposed to be implemented during the traditional clinical orientation for 1st year residents. The structure of the five-session workshop is described as follows:

<u>Session One</u>

- Overall orientation to the institution
- Sharing of tips veteran employees have found useful in navigating the electronic medical record (EMR) system

Session Two

- Overview of burnout on a national scale
- Institutional value placed on reducing risk for burnout
- Institutional and community support resources

Session Three

Small group work:

- Renewal of dedication to the practice of medicine
- Discussion about positive experiences with patients and in medicine as a profession
- Shared experiences from veteran multidisciplinary hospital faculty

Session Four

Continue small group work:

- Focus on the harm and adverse events that can occur in medicine and their potential to lead to feelings of burnout
- Discussion about the darker side of medicine that residents have personally witnessed or experienced, such as loss of a patient or medical error
- Shared experiences from veteran multidisciplinary hospital faculty

Session Five

- Focus on individual coping and daily stress management practices
- Opportunity for one-on-one sessions with a mental health professional to learn more about stress reduction practices
- Emphasis on developing a personal wellness plan as residents finish the orientation program and move on into professional practice

For those already experiencing burnout, a Burnout Response Team will be established as an intervention pathway. Team members are multidisciplinary and include:

*Wellness Coordinators.* These individuals are full-time mental health staff. Roles include:

- Train and manage team of multidisciplinary wellness advocates
- Coordinate preventative wellness activities for the institution
    - Grand round lectures
    - Support groups
    - Therapy dogs and other relaxation events
- Coordinate intervention services by linking faculty members in need with the correct mental health services and supports

*Advocates.* These individuals are institutional leaders who are champions of burnout reduction and wellness promotion. Their primary role is to provide a safe space for employees to access emotional support or information about how to better manage stress.

**Closing Comments**

While programs designed to minimize work related stress are helpful, each institution should have approaches unique to their needs. Ideally a needs assessment should be initially conducted, followed by an evaluation of the program, and an annual reassessment of the prevalence of burnout and needs of employees. Consistent with the Jobs-Demand Resource Model, a variety of resources and support must be in place for residents to employ to manage work related stress and its mental health impacts. The demands of the medical profession will inevitably persist, so it is imperative that demands are balanced with the availability of resources. Medical school teaches individuals how to practice the art of medicine, but wellness efforts are absolutely critical to ensure they can also manage the art of living the life of a physician.

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## Appendix

The following is the Burnout Inventory that was created and distributed to residents:

**Physician Burnout: A Healthcare Crisis**

**Demographics**

Gender:
Male
Female

Program:
Training Year:
Approximately how many hours a week do you work?

**Total Support:**

Do you feel comfortable reaching out to your peers for support in the workplace?
Never 1 2 3 4 5 Always

Do you feel comfortable reaching out to your senior residents for support in the workplace?
Never 1 2 3 4 5 Always

Do you feel comfortable reaching out to your attending physician for support in the workplace?
Never 1 2 3 4 5 Always

Do you feel that wellness is a priority in your workplace?
Never 1 2 3 4 5 Always

Do you feel like mental health access is a priority in your workplace?
Never 1 2 3 4 5 Always

**Work Life Personal Life Balance**

Do you feel as if your career choice has negatively impacted relationships with your loved ones outside of the workplace?
Not at all 1 2 3 4 5 Definitely

Do you feel like you have an acceptable work life/personal life balance?

Not at all 1 2 3 4 5 Definitely

**Exhaustion**

In the last 3 months how often have you fallen asleep at a stoplight coming home from work or driving to?

Never

1-3 times

5 or more times

How often in the last 3 months have you made an error at work due to being too tired?

Never

1-3 times

5 or more times

How many days in the last week have you felt too tired to be at work?

0 days

1-3 days

More than 3 days

In the last week how many nights did you have trouble sleeping?

0 nights

1-3 nights

More than 3 nights

**Depersonalization**

Do you feel like the work you are doing has a purpose?

Never 1 2 3 4 5 Always

I enjoy seeing my patients.

Never 1 2 3 4 5 Always

I feel irritable at work.

Never 1 2 3 4 5 Always

If you had the choice to go back to your undergraduate program and choose a different path of study, would you still become a doctor?

Yes

No

Would you recommend this profession to someone considering the career?

Yes

No

**Burnout**

Do you think that you have experienced burnout?
Yes
No

If so, when were these feelings of burnout strongest? _____

Have you been exposed to information about burnout?
Yes
No

If you answered yes to the question above, please indicate below how you were exposed to this information:
Medical school
Written materials
Colleagues
No exposure

Do you think some of your colleagues experience burnout?
Yes
No

Would you like to have more exposure to information about burnout and preventative measures to take in regards to its effects?
Yes
No

Do you think that your workplace actively works to prevent burnout?
Yes
No

Are you familiar with the Pathway to Wellness?
Yes
No

Are you familiar with Balance Works?
Yes
No

**Open Ended Questions:**

What do you think the institution could do to most effectively mitigate burnout?

Overall, what aspect of your program do you think causes you the most stress?