LEADING THROUGH BURNOUT: THE INFLUENCE OF EMOTIONAL INTELLIGENCE ON THE ABILITY OF EXECUTIVE LEVEL PHYSICIAN LEADERS TO COPE WITH OCCUPATIONAL STRESS AND BURNOUT

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DEDICATION

To Erick for your unwavering love, support, and confidence in me. Throughout this journey you have celebrated my successes and have brought me back from the brink of letting my frustrations get the best of me. We did this together and I will be forever grateful to you for making this possible.

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ABSTRACT

LEADING THROUGH BURNOUT: THE INFLUENCE OF EMOTIONAL INTELLIGENCE ON THE ABILITY OF EXECUTIVE LEVEL PHYSICIAN LEADERS TO COPE WITH OCCUPATIONAL STRESS AND BURNOUT

Kandi Wiens
Annie McKee

Physician leadership has been endorsed as a critical component of successful healthcare transformation, and emerging evidence suggests that physician leaders offer a competitive advantage to their organizations. Healthcare executive level leadership roles are inherently stressful, and the transition from a clinical environment to an executive level administrative environment generates unique pressures and challenges for physician leaders that non-physician leaders may not experience. When proper coping skills are not present, occupational stress can have a negative impact on a physician leader’s ability to lead effectively and may impact their emotional and physical wellbeing. This mixed methods study explored the perceptions of 35 Chief Medical Officers (CMOs) regarding their experiences with occupational stress and the influence of emotional intelligence (EI) on their ability to cope with the demands and pressures of their role. The primary method of data collection focused on in-depth interviews, and the interviews were supported with quantitative data using the Maslach Burnout Inventory (MBI) to measure CMOs’ perceived level of stress, emotional exhaustion, cynicism, and professional efficacy. Qualitative data was analyzed using an inductive thematic analysis process as well as a deductive thematic analysis process using the Emotional and Social Competency Inventory (ESCI) model to code the data. Three key findings emerged from this study: 1)
EI competencies serve as an effective personal resource that contributes to a CMO’s ability to deal with work-related stress and prevent burnout; 2) CMOs are experiencing high levels of stress, but it is not leading to burnout; and 3) self-efficacy serves as an effective personal resource that contributes to a CMO’s ability to deal with work-related stress and prevent burnout. This study offers an increased awareness of the sources of CMOs’ stress and contributes to an understanding of how emotional intelligence competencies and self-efficacy serve as effective personal resources in the stress appraisal and coping processes.

*Keywords:* stress, occupational stress, coping, burnout, emotional intelligence
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CHAPTER 1: INTRODUCTION

Healthcare in the United States is characterized by continuous and volatile change. The industry faces new challenges and opportunities as health systems strive to deliver higher quality care, lower their operating costs, and redesign the way healthcare is delivered. Payment issues, access problems, technology improvements, and shifting population needs are cited as some of the most common factors affecting delivery of care and transformation of health system operations (Atchison & Bujak, 2001). These environmental dynamics often involve transformational organizational and operational changes that require leaders who can foster commitment from staff at all levels, especially physicians. In many ways, physician leaders are uniquely positioned to garner the support needed to implement organizational changes, and health systems benefit when executive level physician leaders are put at the helm to lead their organizations (Angood & Birk, 2014).

Although physicians may be formally positioned to lead organizations through transformational change, their personal wellbeing and ability to perform at an optimum level may be at risk. Environmental, organizational, and individual factors put mounting pressures on physician leaders, inducing stress and anxiety. It is well known that, when left unmanaged, stress can lead to physical problems (Shirom, Melamed, Toker, Berliner, & Shapira, 2005). Of additional concern is evidence suggesting that stress may result in psychological problems and may lead to burnout—a syndrome associated with work-related stress that includes the dimensions of emotional exhaustion, cynicism, and diminished personal accomplishment or professional efficacy (Maslach & Leiter, 1997). In fact, burnout in the healthcare industry is so prevalent that researchers believe the
problem is a threat to the foundation of the U.S. medical care system (Shanafelt et al., 2012; Bodenheimer & Sinsky, 2014).

In order to manage their stress levels and effectively lead others, executive level physician leaders may benefit from using their personal resources to effectively cope with work-related stress. Specifically, emotional intelligence (EI) is a personal resource that may contribute to their ability to recognize and manage stress, enabling them to maintain their wellbeing and continue to effectively lead others.

**Problem Statement**

Because physician leadership is so vital in today’s rapidly changing healthcare environment, there is a need to better understand the stress that may impact physician leaders’ wellbeing and professional effectiveness. Additionally, research is needed to learn more about individual abilities, such as EI, that enable physician leaders to cope with work-related stress.

Several gaps in the literature support the need for this study. First, burnout research has primarily focused on human services workers, and the emerging field of physician burnout has produced a wealth of rich research over the last 30 years. Evidence also suggests that leaders experience burnout (Lee & Ashforth, 1996; Bakker & Demerouti, 2007, 2014), but what about physician leaders? Do they also experience burnout as a result of the enormous stress they are faced with? Second, EI is a critical competency needed to lead in today’s rapidly changing healthcare environment (Lobas, 2006), and EI has been linked to one’s ability to successfully manage stress (Boyatzis & McKee, 2005; Nikolaou & Tsausis, 2002; Por, Barriball, Fitzpatrick, & Roberts, 2011; Görgens-Ekermans & Brand, 2012). Studies examining the benefits of EI in healthcare
are sparse (Mintz & Stoller, 2014), and very few studies have explored EI in relation to burnout. Third, there appear to be no empirical studies focused directly on whether or not executive level physician leaders experience burnout, and if so, along which dimensions—emotional exhaustion, cynicism, and/or professional efficacy. Finally, while there is evidence suggesting a movement to include EI in physician leadership development programs (Mintz & Stoller, 2014), little is known about whether these programs discuss ways in which EI can help physician leaders manage stress.

Research Questions

This research study explored executive level physician leader beliefs related to work-related stress. The objective of this study was to measure specific aspects of stress and burnout for executive level physician leaders and to discover if they possess EI competencies that enable them to manage stress and burnout. The primary research questions for this study are:

**Question One:** Do Chief Medical Officers perceive that work-related stress impacts their wellbeing and/or leadership effectiveness? If so, how?

**Question Two:** Do Chief Medical Officers perceive that emotional exhaustion, cynicism, and/or diminished professional efficacy impact their leadership effectiveness?

**Question Three:** Do Chief Medical Officers perceive that emotional intelligence competencies contribute to their ability to deal with work-related stress? If so, how?
Definition of Terms

Embedded in these research questions are several concepts that are critical to the focus of my research. I provide the definition of each concept below for the sake of clarity given their conceptual association with the research questions. However, it is important to note that both the concepts and their definitions emerged as a result of my review of the literature, which is described in the following chapter. The concepts are:

Executive level physician leaders: I use the term executive level physician leader to refer to physicians who are formal members of the executive team for a medical group, hospital, or health system. Executive level physician leaders may be in such positions as Chief Executive Officer (CEO), Chief Operating Officer (COO), Chief Financial Officer (CFO), Chief Medical Officer (CMO), Chief Population Health Officer (CPHO), Medical Director, Department Chair, Service Line Director, or Vice President for Medical Affairs (VPMA).

Occupational stress: I use a definition of stress developed by Lazarus and his colleagues, which says that stress is defined in terms of a disruption of the equilibrium of the cognitive-emotional-environmental system by external factors. If those external factors include events, people, and duties of the work environment, then the related stress is called occupational stress (Lazarus, 2006; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). Given this definition, I use the terms occupational stress and work-related stress interchangeably throughout this dissertation.

Burnout: I use a definition of burnout developed by Maslach, which says that burnout is a consequence of adverse working conditions characterized by emotional
exhaustion, depersonalization or cynicism, and reduced personal accomplishment or professional efficacy (Maslach, 1998).

Coping: I use a definition of *coping* developed by Lazarus and his colleagues, which says that coping is defined as a person’s constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the person’s resources (Lazarus & Folkman, 1984).

Emotional intelligence: My references to *emotional intelligence (EI)* are based on agreement between three popular models’ (Salovey & Mayer, 1989; Bar-On, 1997; Goleman, 1998) conceptualizations of EI. These models’ descriptions, definitions and conceptualizations of EI have included one or more of the following key components: 1) the ability to recognize, understand and express emotions and feelings; 2) the ability to understand how others feel and relate with them; 3) the ability to manage and control emotions; 4) the ability to manage change and adapt and solve problems of a personal and interpersonal nature; 5) the ability to generate positive affect; and 6) the ability to motivate oneself. I chose to refer to EI in these terms because the agreement between these three models provides support for the argument that the ability to understand and productively manage emotions is an important contributor to one’s ability to deal with work-related stress.

The following sections describe the value physicians provide in leadership roles, the unique challenges they experience, and the implications of these challenges on their personal wellbeing and professional effectiveness. Additionally, a description of EI and how this can be used as a method for dealing with work-related stress and burnout is provided.
Physician Leadership—A Unique Competitive Advantage

Historically, health systems were predominantly led by executives without medical degrees, but emerging evidence suggests that many organizations are recognizing the unique capabilities of physician leaders as individuals who can help their organizations in the ever-changing healthcare environment (Angood & Birk, 2014). Today, approximately five percent of hospital executives are physicians, and that number is expected to increase rapidly as healthcare reform takes shape (Angood & Birk, 2014). This has been attributed to physician leaders’ abilities to draw upon their clinical experiences while developing strategies and making administrative decisions that support the achievement of organizational objectives. Additionally, physician leaders are said to have a unique ability to leverage the high degree of credibility and trust among their colleagues to gain critical support for organizational changes.

In the context of major organizational roles, the term “executive level physician leader” refers to those physicians who formally become members of the executive team for a medical group, medical staff, hospital, health system, academic center, or health-related business. In these roles, their primary responsibilities are focused on leadership and management activities. Executive level physician leaders may hold roles such as Chief of Staff, Medical Director (of a program, clinical area, or institution), Service Line Director, Vice President for Medical Affairs, Department Chairperson, Dean, Chief Medical Officer, or even Chief Executive Officer. As such, they are increasingly responsible for planning strategy, service operations and integration; ensuring clinical quality and compliance; and managing physician and non-physician staff members. In these management and leadership roles, they are also held accountable for meeting
financial and programmatic targets, communicating effectively, and building consensus among various stakeholder groups.

Because physician leaders have credibility and easily garner trust, they have the ability to create a unique competitive advantage for their organizations (Angood & Birk, 2014; Goodall, 2013; Angood & Shannon, 2014). Accordingly, physician leadership has been endorsed as a critical component of successful healthcare transformation (Angood & Shannon, 2014). This is supported by evidence suggesting that health systems and patients benefit when physicians take on leadership roles. Several examples are provided below.

In a study conducted by the Centers for Medicare and Medicaid Services (CMS), results show that physician leadership made a positive impact on the first year of experience with accountable care organizations (ACOs) (Fisher, Staiger, Bynum, & Gottlieb, 2007). According to their report, physician-led ACOs tend to be more successful than hospitals in improving care coordination, chronic disease management, and prevention. Furthermore, the 2013 U.S. News and World Report rankings for hospitals include an “Honor Roll” that lists 18 organizations. The top five are led by physicians, and 10 of the 18 are physician-led (Olmsted et al., 2013). Another study conducted by Goodall (2011) looked at the link between physician leaders and hospital performance for the top 100 U.S. hospitals as reported by U.S. News and World Report. For three specialties (cancer, digestive disorders, and heart and heart surgery), the study found a strong positive association between the ranked quality of a hospital and whether the CEO was a physician (p<0.001). Finally, a study conducted by McKinsey & Co. (Mountford & Webb, 2009) found strong physician leadership to be associated with
reduced rates of hospital-acquired infection and hospital readmission, greater patient satisfaction, and improved financial margins.

The advantages of physician leadership have been attributed to several factors. First, physician leaders are able to leverage their front-line clinical experience to inform administrative decisions. According to Goodall (2013), having clinical expertise provides an advantage, because it allows these individuals to acquire a deep intuitive knowledge about the core business of their organization, which may help with decision-making and strategy development. Specifically, physician leaders can draw upon their clinical training and experience to assess the possible effects of administrative decisions on the quality of care (Angood & Shannon, 2014).

Secondly, because of their clinical experience, physician leaders tend to have a high degree of credibility and trust among their colleagues and other providers (e.g., nurses, surgical technicians, nurse practitioners, physician assistants, etc.) (Angood & Birk, 2014; Falcone & Satiani, 2008; Lee, 2010). A shared history and common language, along with the respect and authority traditionally conferred on physicians, can foster trust in them as leaders. Being regarded in such a way gives them a unique advantage to garner critical support for transformational change initiatives, such as reducing variations in care, reducing readmissions, optimizing physician productivity, controlling operational costs, and other value-driving changes (Angood & Birk, 2014). Additionally, physician leaders who have greater credibility may act as role models for other medical staff, and their presence may help their organization attract top level medical talent (Goodall, 2013).
Evidence shows that the value physician leaders bring to healthcare organizations is significant. Indeed, there is a great need for physician leaders to improve the quality and efficiency of the U.S. healthcare delivery system. These talented men and women possess characteristics inherently useful for leadership, are uniquely positioned to become leaders, are regarded as effective change agents, and have an innate understanding of the front lines of care (Angood & Shannon, 2014). However, despite the positive aspects of physicians as hospital leaders, these individuals may experience pressures that lead to high levels of stress and burnout. The following section will discuss the challenges and pressures faced by physician leaders today.

**Challenges Faced by Physician Leaders Today**

It is widely understood that healthcare is an especially challenging system in which to lead. Some of the primary factors that contribute to these challenges include: 1) a complex and dynamic external environment, 2) the continual emergence of new technologies, 3) nursing shortages and increased levels of physician burnout, and 4) multiple, and at times competing, delivery goals. Considering these dynamics, many different stakeholders may experience the effects of this environment: patients and their families, payers, providers, administrators and staff, nurses and other clinicians, and of course physicians and physician leaders.

In such environments, physician leaders face constant pressure, which may contribute to the experience of both acute and chronic work-related stress. This section will explore several factors that create unique challenges for physician leaders and may contribute to their stress and burnout. I first describe how various healthcare industry environmental factors create uncertainty and ambiguity and how this may impact
physician leaders’ stress levels. Second, I discuss how socialization factors associated with historical models of medical training may create difficulties for physician leaders as they make the switch from medical provider to organizational leader. I then discuss stress-related factors associated with the development of new skills as one transitions from the role of care provider to leader. Individually and collectively, these challenges can create a high degree of stress for physician leaders and may result in unfortunate consequences to their wellbeing and professional effectiveness.

**Environmental factors.** Several environmental factors create challenges for physician leaders as they strive to lead their organizations through transformational change. Angood and Birk (2014) present five factors that impact these challenges: 1) the payment system is shifting from being volume-based to value-based, 2) the public health-oriented focus on the management of populations is moving towards managing care across the continuum, 3) clinical care models are being fundamentally redesigned, 4) there is an increased focus on financial payment models that reward healthcare organizations for clinical excellence and coordinated care at reduced cost, and 5) there is an emergence of new payment models that increase provider risk, capitation, and bundled payment strategies. These broad and critical trends are just a few catalysts that can heighten uncertainty and generate an escalating spiral of distress and anxiety for physician leaders who are at the forefront of healthcare reform.

**Physician socialization factors.** Beyond environmental factors, the literature suggests that the way physicians are socialized into the medical profession may also play a role in contributing to their stress. Medical training emphasizes perfectionism, denial of personal vulnerability, and delayed gratification (Miller & McGowen, 2000; Spickard,
Gabbe, & Christensen, 2002; Wallace, Lemaire, & Ghali, 2009). Additionally, characteristics such as compulsiveness, guilt, and self-denial may facilitate success in medical education and training; however, these same traits can fuel feelings of inadequacy as one transitions into the role of a physician leader (Gazelle, Liebschutz, & Riess, 2015). When physicians begin working in a professional culture that looks down on weakness and self-care (Miller & McGowen, 2000; Spickard et al., 2002; Wallace et al., 2009; Novack et al., 1997), the aforementioned factors may contribute to a physician leaders’ stress. Another socialization factor that may contribute to physician leaders’ stress is the time it takes to realize the results of current-day decisions. Leading in nonclinical environments often means not knowing the impact of a decision for months or years after the decision is made. This can induce anxiety and stress for physicians who are enculturated in an environment where the results of their decisions and actions are more immediate (Gazelle, et al., 2015).

**Transitional Factors.** High degrees of stress may also be induced as a physician transitions from a role as medical provider to a role as health system leader. The contrasts between the role of a physician and that of a health system executive are striking; and the skills needed to be successful in each role are also quite dissimilar.

First, while medical school and residency training emphasize autonomous problem-solving and authoritative decision-making approaches (Angood & Birk, 2014), these skills are discouraged when physician leaders need to make organizational changes as part of an executive leadership team. Because these management approaches are misaligned with the large-picture, vision-oriented, collaborative approach needed to develop strategy; lead clinical integration; and motivate teams, hospitals and systems to
produce sustainable improvements, physicians may encounter difficulties when making the transition from clinical to leadership roles.

Second, executive level physician leaders are typically responsible for addressing inherent conflicts between autonomous physicians and hospital goals, and the skills needed to do so require a shift from operating as a lone healer and independent decision maker to one in which collaboration skills are at the forefront. Furthermore, physicians may have difficulty making the shift from an episodic, problem-solving mindset to the ambiguity and uncertainty inherent in many healthcare leadership problems. This transition may take years of unlearning old behaviors while they attempt to adopt new behaviors that are required to lead in nonclinical environments (Angood & Birk, 2014).

Third, practicing physicians typically have the respect and trust of colleagues, so they prescribe and expect compliance. In leadership, colleagues may be suspicious of them being a “suit,” which may make it more difficult for them to lead, influence and collaborate. Stress may also be induced as physicians learn to manage and lead beyond their historical circle of colleagues. Building new relationships and developing trust takes time and patience and may require the development of skills that were not nurtured during medical training.

Fourth, while providing care, physicians typically work with one patient at a time on well-defined problems. Additionally, they may work with a small group of healthcare workers, but within that small group, the physician is the expert and they often receive a lot of recognition and appreciation for their work. In contrast, health system executives are accountable to a variety of constituents ranging from the board of directors to front line employees. In this respect, stress can result as physicians move from roles that tend
to work in isolation or small groups to roles that require them to achieve consensus as they lead their organizations through transformational change.

Finally, physician executives lead in organizations that have hundreds or thousands of employees and many millions of dollars at risk (Falcone & Satiani, 2008). Learning to understand and appreciate the totality of a large organization while dealing with the ambiguity of an uncertain future can cause additional strain for physician leaders who know they have so much at stake. Additional stress may also be triggered as a result of feeling underqualified compared with other members of the leadership team who may have decades of hospital operations experience.

Implications of Physician Leader Stress

Physician leaders who experience the pressures and challenges described above may experience high levels of stress. This stress can have a negative impact on their ability to lead effectively while also adversely affecting their personal health and wellbeing. Furthermore, work-related stress may be so intense that it may lead to a physician leader becoming burned out.

Leadership effectiveness. Researchers say that when leaders experience high degrees of stress, they are likely to withdraw psychologically and physically from their work (Maslach & Leiter, 1997). They don’t invest the required time, effort, commitment, and creativity to produce high-quality work. In addition to doing less, the quality of their work is lower, and they are absent more often. The bottom line impact is a drop in quality and quantity of their work (Maslach & Leiter, 1997).

Burnout. High levels of work-related stress can result in a psychological manifestation known as burnout, a syndrome characterized as a long-term consequence of
adverse working conditions (Leiter, Bakker, & Maslach, 2014). The qualities of energy, involvement, and efficacy underlay the three dimensions of the concept: emotional exhaustion; depersonalization or cynicism; and diminished levels of personal accomplishment or professional efficacy (Maslach & Leiter, 1997). It is different than a more general state of depression, which pervades every aspect of one’s life without being tied to the work domain (Maslach & Leiter, 1997).

Burnout among U.S. physicians is common, with an estimated 30% to 40% experiencing burnout across various specialties (Dyrbye & Shanafelt, 2011). Preliminary evidence suggests that excessive workloads (e.g., work hours, on-call responsibilities); subsequent difficulty balancing personal and professional life; and deterioration in work control, autonomy, and meaning in work contribute to burnout in physicians (Shanafelt et al., 2009; Dyrbye & Shanafelt, 2011). Additionally, some aspects of healthcare reform may adversely affect a physician’s workload, autonomy, and work-life balance, potentially exacerbating many of these stressors (Dyrbye & Shanafelt, 2011).

Although burnout has been studied extensively in human services professions, ample empirical evidence shows that burnout may be found in any occupation (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Unfortunately, leader burnout has not been widely studied, but one can conclude that the combination of pressures and expectations faced by physician leaders, along with the necessity of complying with and implementing new policies in order to adhere to changes in healthcare, may create levels of stress that make them susceptible to burnout. This conclusion can be drawn based on the prevalence of burnout among practicing physicians (Shanafelt et al., 2012) as well as evidence suggesting that burnout can be experienced by individuals working in non-
human services roles, including leadership positions (Lee & Ashforth, 1996; Bakker & Demerouti, 2007, 2014).

**Coping Strategies to Deal with Occupational Stress and Burnout**

The literature suggests that there are three categories of strategies that are relevant to occupational stress and burnout: 1) strategies that individuals use to manage the relationship between the work and non-work domains, 2) strategies that individuals apply to change their job characteristics such that the job is less demanding and more motivating, and 3) strategies that individuals use to deal directly with diminished resources (e.g., coping) (Leiter, et al., 2014). Because of the potentially high risk of physician leader burnout, it is important to understand which strategies enable them to prevent or counteract burnout. While all three strategies may play an important role in preventing or minimizing burnout, it is interesting from a theoretical and practical point of view to closely examine the third category (i.e., methods and competencies that support superior coping abilities).

Coping is defined as “changing cognitive and behavioral efforts developed for managing the specific external and/or internal demands judged as exceeding or surpassing the individual’s own resources” (Lazarus & Folkman, 1984, p.164). On the basis of the objectives of coping, researchers have made an important distinction between coping oriented to the problem and coping oriented to the emotion (Lazarus & Folkman, 1984). Problem-focused coping represents an attempt to respond directly to the stressful event, whereas emotion-focused coping consists of attempts to moderate the emotional response to the stressful event (Demerouti, 2014).
Research shows that burnout seems to have a stronger relationship to emotion-focused coping than problem-focused coping (Demerouti, 2014). Discovering individual-level strategies that support superior emotion-focused coping abilities may help inform the development of interventions targeted to guide physician leaders. Doing so may provide support to them such that they apply emotion-focused coping strategies that are more effective, and refrain from using non-effective strategies to avert burnout or minimize its effects.

One such method for developing emotion-focused coping abilities may be through the development of emotional intelligence (EI). This concept is explored in more detail in the next section.

**The Value of Emotional Intelligence for Physician Leaders**

Researchers around the world say that there are three clusters of competencies that differentiate outstanding from average performers (Boyatzis, 2008). These three clusters are viewed as a behavioral approach to emotional, social, and cognitive intelligence. EI is said to be one of these three clusters and is described as the “ability to recognize, understand, and use emotional information about oneself that leads to or causes effective or superior performance” (Boyatzis, 2008, p.8).

EI is a valuable resource for physician leaders for two key reasons. First, there is an abundance of evidence supporting the importance of EI as a key leadership competency in business leaders. In fact, hundreds of studies over the last forty years show that the competencies associated with EI have a greater impact on predicting leadership effectiveness than experience, expertise, and cognitive ability (McKee, Boyatzis, & Johnston, 2008; Boyatzis, 2008). EI is also considered a key leadership competency
needed by healthcare leaders (Lobas, 2006; Stoller, 2004; Mintz & Stoller, 2014) as they navigate the business of medicine; develop effective social networks; collaborate with peers across specialties; and balance patient needs with organizational objectives (Mintz & Stoller, 2014). In a meta-analysis of the literature on physician leadership and EI, Mintz and Stoller (2014) report that EI is widely endorsed and recommended as a way of developing physician leadership at the executive level. Likewise, Dye and Garman (2015) present findings based on an extensive literature review, a review of competency lists prepared by boards and executives for executive searches, and surveys and interviews with healthcare executives and search consultants. The 16 competencies advocated by Dye and Garman include several EI competencies such as self-awareness, adaptability, and consensus building. Because EI is central to the success of physician leaders, EI development is being increasingly integrated into healthcare leadership development programs, including those specifically focused on physician leadership development (Mintz & Stoller, 2014).

The second key value EI provides to physician leaders is that it may contribute to their emotion-focused coping abilities, enabling them to productively deal with work-related stress (Boyatzis & McKee, 2005). Studies consistently show a negative correlation between EI and stress at work (Nikolaou & Tsaisis, 2002; Por, et al., 2011; Görgens-Ekermans & Brand, 2012). Findings from these studies show that the ability to effectively manage emotions and emotional information in the workplace assists employees in coping with occupational stress.
Conclusion

Success in executive level healthcare leadership roles requires one to not only understand and anticipate the impact of environmental forces; it also necessitates the need for physician leaders who are able to guide the people within their organizations through complex change initiatives. Many of these changes are set in an environment that is highly uncertain, multifaceted, and challenging. Coupled with the inherent stress of leadership in general, it is no wonder physician leaders may feel threatened in one way or another.

However, despite the fact that physician leaders may experience similar stressors in their role, individuals differ in how they are able to withstand demands and their capacity to effectively use available resources, such as emotion-focused coping abilities (Leiter et al., 2014). There is strong agreement in the literature that the ability to effectively recognize and manage emotions, two key components of EI, assists people in dealing with work-related stress and mitigating the risks of burnout (Boyatzis & McKee, 2005; Nikolaou & Tsausis, 2002; Por et al., 2011; Görgens-Ekermans & Brand, 2012).

The purpose of this study was to learn more about whether executive level physician leaders experience burnout, and whether EI enables them to cope with occupational stress. Having described my research interests, chapter two provides an overview of the conceptual framework and the major theoretical tenets that underlie the study.
CHAPTER 2: LITERATURE REVIEW

The purpose of Chapter 2 is to provide an overview of the ideas, theories, and significant literature related to occupational stress, burnout, and emotional intelligence. In this chapter, I present the conceptual framework used to guide this study, and provide a critical review of the research related to the aforementioned topics.

Conceptual Framework

Conceptually, this study was designed to explore whether executive level physician leaders experience burnout, and if so along which dimension(s). Additionally, this study examined their possession of EI competencies that contribute to their ability to deal with occupational stress and burnout. Figure 1 depicts the conceptual framework for this study.

Figure 1: Conceptual framework for the study
The approach used for this literature review focused on critically evaluating existing theoretical and empirical research in order to rigorously evolve the conceptual framework for the study (Ravitch & Riggan, 2012). The literature review expands on the conceptual framework by focusing on four topics that can help understand the research questions of this study: 1) occupational stress, 2) burnout, 3) coping, and 4) emotional intelligence. But first, it is necessary to understand an overview of the stress literature before exploring these theoretical frameworks in depth.

Stress

According to Lazarus and Folkman (1984), stress is defined as a disruption of the equilibrium of the cognitive-emotional-environmental system by external factors. Researchers say that two processes—cognitive appraisal and coping—serve as mediators in stressful individual–environment relations to impact immediate and long-range outcomes (Folkman et al., 1986).

Through cognitive appraisal, an individual evaluates whether a particular encounter with the environment is relevant to his or her wellbeing, and if so, in what ways. This is viewed as a two-part process, including primary appraisal and secondary appraisal. Through primary appraisal, people evaluate whether or not they have anything at stake in the encounter. Through secondary appraisal, people evaluate what, if anything, can be done to prevent or overcome harm or to improve the prospects of benefit. When an individual is faced with a stressor, primary and secondary appraisals interact, and the individual assesses the stressor as a threat or a challenge. A stressor is viewed as a challenge when adequate resources are deemed to meet the situational demands, whereas
stressors are viewed as a threat when situational demands outweigh resources (Lazarus & Folkman, 1984).

Challenge and threat appraisals are said to differently affect physiological responses, performance, and emotions. When a stressor is viewed as a challenge, people approach the situation with a problem-solving mindset and attempt to resolve the issues at hand. When a stressor is viewed as a threat, people evaluate various coping options, such as altering the situation, accepting it, seeking more information, or holding back from acting impulsively and counterproductively (Schneider, Lyons, & Khazon, 2013).

Common examples of major life events that cause stress are death, divorce, loss of a job, starting a new job, moving, getting married, chronic illness or injury (Lazarus & Folkman, 1984). Another common source of stress is the workplace, also called occupational stress. Occupational stress is the focus of this study, specifically in the environment of physician leaders in U.S. healthcare organizations.

**Occupational Stress**

Occupational health research over the last 2 decades has continued to be dominated by stress and stress-related topics (Weng et al., 2011). While there has been some disagreement among researchers regarding a standard definition of occupational stress (Hart & Cooper, 2001), many studies appear to base their conceptualizations on a theory of psychological stress and coping developed by Lazarus and his colleagues over a number of years (Lazarus, 2006; Folkman et al., 1986). In the Lazarus model, stress arises when individuals perceive that they cannot adequately cope with the demands being made on them or with threats to their wellbeing (Lazarus & Folkman, 1984).
Within the occupational stress literature, three theoretical frameworks provide a strong foundation that enables us to better understand causes and implications of occupational stress: 1) the Job Demands-Resources Model, 2) Conservation of Resources Theory, and 3) Psychological Contract Theory. I will conclude this section with a review of the literature related to outcomes and consequences of occupational stress.

**Job Demands-Resources Model.** The Job Demands-Resources Model says that stress is a response to an imbalance between demands on an individual and resources that individual has to deal with those demands (Bakker & Demerouti, 2007). Job demands include physical, psychological, social, or organizational aspects of the job that require sustained mental or physical effort or skills. Examples include quantitative job demands such as workload and time pressure and qualitative job demands such as role conflict and role ambiguity. Job resources include physical, psychological, social, financial, or organizational aspects of the job that help employees achieve work goals, reduce job demands, and/or stimulate personal growth and development. Examples include training, supervisor coaching, budget support, and autonomy.

**Job demands.** Quantitative job demands (e.g., too much work for the available time) have been studied by many burnout researchers, and the findings support the general notion that burnout is a response to overload (Maslach, Schaufeli, & Leiter, 2001). Excessive workload and time pressure are strongly and consistently related to burnout, particularly the exhaustion dimension. This pattern is found with both self-reports of experienced strain and more objective measures of demands, such as number of hours worked and number of clients.
Studies of qualitative job demands have focused primarily on role conflict and role ambiguity, both of which consistently show a moderate to high correlation with burnout (Maslach et al., 2001). Role conflict occurs when conflicting demands at the job have to be met, whereas role ambiguity occurs when there is a lack of adequate information to do the job well. Other qualitative job demands (such as the severity of clients’ problems) have only been studied occasionally, but the correlations are in the same direction.

**Job resources.** In addition to studying the presence of job demands, burnout researchers have investigated the absence of job resources. Social support has been studied most extensively, and there is now a consistent and strong body of evidence that a lack of social support is linked to burnout (Bakker, Demerouti, & Verbeke, 2004; Ray & Miller, 1994; Yürür & Sarikaya, 2012; Halbesleben, 2006; Leiter & Maslach, 1988). Similar research indicates that colleague and supervisor social support can reduce burnout (Collings & Murray, 1996; Gibson, Grey, & Hastings, 2009; Sand & Miyazaki, 2000). For example, in his meta-analytic study of 114 studies on support and burnout, Halbesleben (2006) found that coworker and supervisor support were negatively related to exhaustion and cynicism and positively related to personal accomplishment.

Another set of job resources has to do with information and control. A lack of feedback is consistently related to all three dimensions of burnout. Burnout is also higher for people who have little participation in decision making. Similarly, a lack of autonomy is correlated with burnout, although the strength of the relationship is weaker (Maslach et al., 2001).
**Job demands-resources relationship to burnout.** The presence of demanding job characteristics combined with the absence of resources or motivational job characteristics has been linked to burnout (Leiter et al., 2014). Researchers argue that exhaustion and cynicism emerge from the presence of work overload and social conflict, whereas lack of efficacy seems to arise more clearly from a lack of relevant resources (Maslach et al., 2001). Studies have also linked the demands of adjusting to a restructured work environment, including the uncertainty inherent in such changes, to job burnout (Noblet, Rodwell, & Allisey, 2009; Carter et al., 2013; Raftopoulos, Charalambous, & Talias, 2012).

**Conservation of Resources Theory.** While the Job Demands-Resources Model has seen a lot of deserved attention in the literature over the past decade, another rich theoretical framework often cited in relation to occupational stress and burnout is the Conservation of Resources theory (Leiter et al., 2014). This theory hypothesizes that people have a natural drive to obtain, retain, and protect those resources that they highly value (Hobfoll, 1989). Resources are defined as “objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as a means for attainment of these objects, personal characteristics, conditions, or energies” (Hobfoll, 1989, p.516). Furthermore, the Conservation of Resources theory proposes two primary processes related to resources: one of conservation and one of acquisition. The conservation process is a process whereby individuals are motivated to conserve what resources they have because resource loss is seen as being significantly more problematic than equivalent gain (Hobfoll, 1989; Hobfoll & Freedy, 1993).
Accordingly, burnout is most likely to occur when resources are threatened by the environmental conditions, when resources are lost as a response to threatening conditions, and when resources are invested for additional resource gain but anticipated gains are never reached (Hobfoll, 1989). Under conditions of resource loss, individuals try to limit the negative consequences of resource loss by investing additional resources, which further puts their resource reserves at stake and promotes the occurrence of burnout. As a result, when individuals experience stress, they are more likely to engage in coping efforts that they perceive will limit future resource losses (Shirom et al., 2005).

**Psychological Contract Theory.** Psychological Contract Theory is also relevant to the discussion of occupational stress and burnout. Psychological contracts are conceptualized as the employee’s belief in what the employer is obliged to provide based on the employee’s perceived promises of reciprocal exchange (Rousseau, 1995). While employees and employers often differ in their perceptions and interpretations of the employment arrangement, some degree of mutuality or shared understanding is essential for both parties to achieve their interdependent goals (Dabos & Rousseau, 2004). For example, mutuality exists when an employee and employer concur that the employer has committed to provide professional development opportunities. However, if the two parties have differences of opinion on what is meant by professional development, psychological contract violation may occur. Violation of a psychological contract may also occur when employees are expected to give more in terms of time, effort, skills, and flexibility than what they originally expected. Organizational demands may also have implications on the psychological contract, and researchers argue that violation of the psychological contract is likely to produce burnout because it erodes the notion of
reciprocity, which is crucial in maintaining wellbeing (Schaufeli, Dierendonck, & Gorp, 1996).

**Implications of occupational stress on individual health and wellbeing.**

Research shows that occupational stress can have serious and potentially damaging consequences for individuals. Stress-induced consequences for individuals have been classified into three main categories—physiological, behavioral, and psychological (cognitive/affective) (Beehr & Newman, 1978). Physical consequences most frequently related to occupational stress include peptic ulcers, cardiovascular disorders, and high blood pressure (Schuler, 1980). Behavioral consequences include absenteeism, loss of appetite, sudden change of smoking habits, and increased alcohol consumption (Schuler, 1980). Psychological implications include withdrawal, negativism, forgetfulness, suicidal ideation, and burnout (Schuler, 1980). For the purposes of this study, the concept of burnout is discussed in detail in the next section.

**Burnout**

Perhaps the most dominant construct in recent occupational stress literature is a phenomenon referred to as burnout. It is conceptualized as a psychological syndrome in response to chronic interpersonal stressors in the work environment (Maslach et al., 2001). In the current literature, job burnout is widely recognized as a three-dimensional, enduring syndrome of exhaustion, cynicism or depersonalization, and reduced professional efficacy (Leiter et al., 2014). The exhaustion component represents the basic individual stress dimension of burnout and refers to feelings of being overextended and depleted of one’s emotional and physical resources. The cynicism, or depersonalization, component represents the interpersonal context dimension of burnout, which refers to a
negative, callous, or excessively detached response to various aspects of the job. The component of reduced efficacy or accomplishment represents the self-evaluation dimension of burnout, which refers to feelings of incompetence and a lack of achievement and productivity at work (Leiter et al., 2014). The following sections explore the history of burnout research, the three dimensions underpinning the construct, situational and individual factors associated with burnout, and the implications and consequences of burnout.

**History of burnout research.** Burnout was first identified in the 1970s as a psychological syndrome resulting from working with people in some capacity. The term was first coined by Freudenberger (1974) to describe the gradual emotional depletion and loss of motivation he observed among people who had volunteered to work for aid organizations in New York. On the basis of his observations, Freudenberger (1974) defined burnout as a state of mental and physical exhaustion caused by one’s professional life. During the same time period, Maslach and her colleagues interviewed human service workers in California to find out how they were coping with client-related stressors (Maslach & Jackson, 1981). The human service workers used the term ‘burnout’ and indicated that they experienced feelings of exhaustion, had developed negative attitudes towards their clients, and often felt that they lacked the professional competence needed to help their clients (Schaufeli, Leiter, & Maslach, 2009).

Early burnout research was primarily exploratory in nature and had the goal of articulating the phenomenon of burnout (Maslach et al., 2001). From the beginning, burnout was studied not so much as an individual stress response but in terms of an individual’s relational transactions in the workplace. Moreover, this interpersonal context
focused attention on the individual’s emotions and on the motives and values underlying his or her work with recipients.

Several themes emerged from this early research, suggesting that the burnout phenomenon had some identifiable similarities. First, it was clear that the provision of service or care can be a very demanding and involving occupation and that emotional exhaustion is not an uncommon response to such job overload. The second component of depersonalization (cynicism) also emerged from early interviews as people described how they tried to cope with the emotional stresses of their work. Moderating one’s compassion for clients by emotional distance from them (“detached concern”) was viewed as a way of protecting oneself from intense emotional arousal that could interfere with functioning effectively on the job. However, an imbalance of excessive detachment and little concern seemed to lead staff to respond to clients in negative, callous, and dehumanized ways. While there was no standard definition of burnout during this early research period, there was an underlying consensus about the three core dimensions of the burnout experience, and subsequent research on this issue led to the development of a multidimensional theory of burnout (Maslach 1998, 2003).

In the 1980s, the work on burnout shifted to more systematic empirical research. This work was more quantitative in nature, utilizing a questionnaire and survey methodology and studying larger subject populations. A particular focus of this research was the assessment of burnout, and several different measures were developed. The scale that has had the strongest psychometric properties and continues to be used most widely by researchers today (Maslach et al., 2001) is the Maslach Burnout Inventory (MBI), developed by Maslach & Jackson (1981).
This shift to greater empiricism in the 1980s and 1990s was accompanied by theoretical and methodological contributions from the field of industrial–organizational psychology. Burnout was viewed as a form of job stress, with links to such concepts as job satisfaction, organizational commitment, and turnover. The industrial–organizational approach, when combined with the prior work based in clinical and social psychology, generated a richer diversity of perspectives on burnout and strengthened the scholarly base via the use of standardized tools and research designs (Maslach et al., 2001).

Although burnout was initially believed to be the result of the delivery of services (e.g., Maslach & Jackson, 1981), research in the 1990s suggested that burnout can be found in virtually every job that has a specific constellation of working conditions. More specifically, when employees are confronted with high job demands and are provided inadequate job resources, they are at risk of developing burnout (Demerouti et al., 2001; Lee & Ashforth, 1996; Bakker & Demerouti, 2007, 2014).

**Three dimensions of burnout.** Researchers agree that burnout is a syndrome characterized along three dimensions: emotional exhaustion, cynicism, and diminished professional efficacy (Maslach, Jackson, & Leiter, 1981). Unlike acute stress reactions, which develop in response to specific critical situations, burnout is considered to be a cumulative reaction to ongoing occupational stressors (Maslach & Leiter, 2008). While the original multi-dimensional model emerged from research with employees in human services and educational occupations, researchers agree that the basic model is applicable to any kind of occupation (Maslach & Leiter, 2008). A discussion related to each dimension is included in the following section.
Emotional exhaustion refers to a state of energy draining that takes the form of mental, emotional and physical tiredness. It is considered to be the central quality of burnout and the most obvious manifestation of this complex syndrome (Maslach, et al., 2001). When people describe themselves or others as experiencing burnout, they are most often referring to the experience of exhaustion. Of the three aspects of burnout, exhaustion is the most widely reported and the most thoroughly analyzed. The strong identification of exhaustion with burnout has led some to argue that the other two aspects of the syndrome are incidental or unnecessary (Shirom, 1989). Others say that while exhaustion is a necessary criterion for burnout, it does not sufficiently encompass the relevant aspects of cynicism and professional efficacy (Maslach, et al., 2001).

Cynicism concerns the development of negative attitudes toward the nature and the recipients of one’s work that may be best described as dysfunctional disengagement and a gradual loss of concern. Within the human services, the emotional demands of the work can exhaust a service provider’s capacity to be involved with, and responsive to, the needs of service recipients. Cynicism is an attempt to put distance between oneself and service recipients by actively ignoring the qualities that make them unique and interesting people. Their demands are more manageable when they are considered impersonal objects of one’s work. Distancing is such an immediate reaction to exhaustion that a strong relationship between exhaustion to cynicism is found consistently in burnout research (Maslach et al., 2001).

Diminished professional efficacy has to do with the tendency to feel incompetent at work, and it goes hand-in-hand with poor self-esteem and insufficiency. The relationship of reduced professional efficacy (i.e., inefficacy) to the other two aspects of
burnout is somewhat complex. In some instances it appears to be a function, to some degree, of either exhaustion, cynicism, or a combination of the two (Byrne, 1994; Lee & Ashforth, 1996). A work situation with chronic, overwhelming demands that contributes to exhaustion or cynicism is likely to erode one’s sense of effectiveness. Furthermore, exhaustion or cynicism can interfere with effectiveness. In other words, it is difficult to gain a sense of accomplishment when feeling exhausted or when helping people toward whom one is indifferent.

**Situational and individual factors linked to burnout.** Burnout is an individual experience that is specific to the work context (Maslach et al., 2001). Research over the past 40 years has maintained a consistent view that there are situational and individual factors that correlate with this phenomenon (Maslach et al., 2001). The results of this research point to links between burnout and occupational, organizational, and individual characteristics.

Occupational characteristics of human services work continue to be a focus of burnout research. Of particular concern in these occupations are the emotional challenges of working intensively with other people in a caregiving role. In the context of healthcare management, occupational characteristics that may contribute to physician leader burnout may include the high degree of uncertainty inherent in the industry and the high level of responsibility associated with leading people through significant organizational changes.

Organizational contextual factors include the organizational and management environment in which work occurs. The organizational context is also shaped by larger social, cultural, and economic forces (Maslach et al., 2001). Healthcare organizational factors have been heavily influenced by transformational change brought on by
healthcare reform, which has had serious implications for physicians’ and physician leaders’ work environments. Some evidence suggests that decreased operating margins and higher physician practice subsidy requirements are increasing the focus on physician productivity (Dyrbye & Shanafelt, 2011). Additionally, government regulations and reporting requirements also increase the administrative burden for physicians (Dyrbye & Shanafelt, 2011).

While some researchers argue that burnout is most commonly attributed to occupational and organizational factors (Maslach & Leiter, 1997), individual factors indeed play a role. Several individual factors such as demographic variables (such as age or formal education), enduring personality characteristics, and work-related attitudes are related to burnout (Semmer & Meier, 2009). In particular, low levels of hardiness (involvement in daily activities, a sense of control over events, and openness to change), an external locus of control, an avoidant coping style, and poor self-esteem typically constitute the profile of a stress-prone individual (Semmer & Meier, 2009).

People who display low levels of hardiness score particularly high on the exhaustion dimension. In addition, burnout is higher among people who have an external locus of control (attributing events and achievements to powerful others or to chance) rather than an internal locus of control (attributions to one’s own ability and effort). Similar results have been reported on coping styles and burnout. It has been found that those who experience burnout cope with stressful events in a rather passive, defensive way. In other research, all three burnout dimensions have been related to lower self-esteem (Maslach et al., 2001).
Additionally, people vary in the expectations and attitudes they bring to their job. Some researchers hypothesize that people who have very high expectations, both in terms of the nature of the work (e.g., exciting, challenging, fun) and the likelihood of achieving success (e.g., curing patients, getting promoted), are at risk for burnout. The assumption is that high expectations lead people to work too hard and do too much, thus leading to exhaustion and eventual cynicism when the high effort does not yield the expected results (Maslach et al., 2001).

**Physician burnout rates.** Decades of research have confirmed a high risk of physician burnout from excessive demands and difficulties maintaining a sustainable work-life balance (Leiter, Frank, & Metheson, 2009). Furthermore, the prevalence of physician burnout is greater than among other U.S. workers (Shanafelt et al., 2012). Medical residents, in particular, report very high levels of burnout, especially in the emotional exhaustion dimension of the syndrome (Leiter et al., 2009). Shanafelt and colleagues recently conducted a national study of burnout among physicians using the Maslach Burnout Inventory (MBI), a validated 22-item questionnaire considered to be the gold standard tool for measuring burnout (Shanafelt et al., 2012). Of the 27,276 physicians who received an invitation to participate, 7,288 (26.7% cooperation rate) completed the survey. Evidence from the study suggests that the sample was generally representative of U.S. physicians from a demographic perspective. Results indicate that 37.9% of the respondents had high emotional exhaustion, 29.4% had high cynicism, and 12.4% had a low sense of personal accomplishment. Substantial differences in burnout were observed by medical specialty. Emergency medicine, general internal medicine, neurology, and family medicine had the highest rates of burnout, whereas pathology,
dermatology, general pediatrics, and preventive medicine (including occupational health and environmental medicine) had the lowest rates.

**The high cost of physician burnout.** Burnout has been mainly conceived as an enduring and static phenomenon experienced by individuals that results in detrimental effects on individual health (Shirom et al., 2005) and impaired organizational behavior (e.g., poor performance and high levels of absenteeism) (Schaufeli, 2003). This section will explore the many consequences burnout has on physician wellbeing, the organizations with which they work, and the patients they serve.

There is a solid background of literature linking burnout to adverse personal outcomes, including implications for one’s physical health, psychological health, and relationships. Evidence suggests that burnout has been linked to negative physical health symptoms, such as musculoskeletal pain (Armon, Melamed, Shirom, & Shapira, 2010) and cardiovascular disease (Melamed, Shirom, Toker, Berliner, & Shapira, 2006). Burnout has also been related to negative psychological health issues (Tang, Au, Schwarzer, & Schmitz, 2001) and work behavior outcomes (e.g., turnover intentions) (Laschinger, Leiter, Day & Gilin, 2009). Burnout also seems to contribute to broken relationships, problematic alcohol use, and suicidal ideation (Shanafelt et al., 2012).

In addition to harmful effects on physician wellbeing, burnout has serious implications for the organizations in which they work. For example, researchers have found that burnout contributes to decreased physician retention (Bylsma, Arnold, Fortna, & Lipner, 2010) and correlates with self-reported suboptimal care, patient noncompliance, and medical errors (Spickard et al., 2002; Leiter et al., 2009; Wallace et al., 2009). More recent studies suggest that physician distress leading to burnout may
erode professionalism, adversely affect quality of care, increase the risk for medical errors, and promote early retirement (Wallace et al., 2009; Dyrbye, et al., 2010; Shanafelt, Sloan, Satele, & Balch, 2011; Balch, Shanafelt, Sloan, Satele, & Freischlag, 2011; Shanafelt et al., 2012). Burnout may also be “contagious” and perpetuate itself through informal interactions on the job (Bakker, Schaufeli, Sixma, & Bosveld, 2001).

**Coping with Stress and Burnout**

Occupational stress is frequently experienced by physicians and physician leaders, and without proper coping skills this stress may lead to burnout. Coping is defined as an individual’s constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the individual’s resources (Lazarus & Folkman, 1984). Three key features underpin this conceptualization. First, coping is process oriented, meaning that it focuses on what a person actually thinks and does in a specific stressful encounter and how this changes as the encounter unfolds. Second, coping is viewed as contextual, which means that it is influenced by a person’s appraisal of demands as a result of the encounter as well as an appraisal of resources available to manage them. The emphasis on context means that specific person and situation variables together shape coping efforts. Third, coping is defined as a person’s efforts to manage demands. Coping does not place judgments on whether or not the efforts are successful (Lazarus & Folkman, 1984).

Coping has two widely recognized major functions: regulating stressful emotions (emotion-focused coping) and altering the affected person-environment relationship causing the distress (problem-focused coping) (Lazarus, 2006; Lazarus & Folkman, 1984). Emotion-focused coping concerns one’s ability to effectively deal with emotions
and emotional information in the workplace, therefore lessening the threat of burnout. Researchers believe that emotion-focused coping seems to have a stronger relationship with preventing burnout than does problem-focused coping (Leiter et al., 2014). This would suggest that individuals who have higher degrees of emotional awareness and emotional self-regulation, two components of EI, are less vulnerable to burnout. A more in-depth understanding of the EI literature is necessary to understand how EI competencies contribute to one’s emotion-focused coping abilities and how this may regulate their appraisals of stressful events.

**Emotional Intelligence**

Because of the potential importance of EI to coping with occupational stress and preventing burnout, an exploration of the EI literature is critical to understanding how individuals can productively manage their emotions while experiencing work-related stress. Moreover, it is important to explore the role that specific EI competencies play in contributing to one’s emotion-focused coping abilities. The following sections describe the history of EI research, three popular EI models, and EI competencies that may contribute to one’s ability to deal with occupational stress and burnout.

**History of emotional intelligence research.** An often-cited definition of intelligence is Wechsler’s (1958) statement that “intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment” (p.17). However, many theorists argue that intelligence manifests in a variety of ways and therefore can be subdivided into more specific forms of intelligence (Gardner, 1983; Salovey & Mayer, 1989; Thorndike, 1920; Wechsler, 1958), such as social intelligence. The idea of social intelligence emerged as early as 1920 when...
researchers focused their efforts on describing, defining, and assessing socially competent behavior (Bar-On, 1997). For example, Thorndike (1920) broadly defined social intelligence as the ability to perceive the internal states of self and others and to act in ways that use this information effectively. Over time, theorists have shifted their attention from describing and assessing social intelligence to understanding the purpose of interpersonal behavior and the role it plays in one’s ability to effectively adapt (Zirkel, 2000). These arguments helped position social intelligence as part of general intelligence (Bar-On, 1997), but after many failed attempts to measure the construct of social intelligence, Cronbach (1960) concluded that the concept of social intelligence was too broad. Therefore, he abandoned the idea that social intelligence could be inarguably defined and measured.

More than twenty years later, Gardner (1983) introduced the concept of “multiple intelligences,” and interest in social intelligence resurfaced. Gardner proposed that general intelligence could be broken down into eight intelligences (including social intelligence), and that social intelligence could be further divided into two subcomponents: interpersonal and intrapersonal intelligence. He defined interpersonal intelligence as the ability to understand other people and know what they are feeling. In contrast, intrapersonal intelligence is the ability to access one’s own feelings. Gardner’s (1983) attention to feelings, or emotions, coupled with the progress that experts had made in operationalizing and measuring social intelligence, eventually led researchers to probe deeper into learning more about the emotional processes underlying social intelligence, and the field of EI emerged. Building on Gardner’s early descriptions of social
intelligence, several researchers developed different definitions and conceptualizations of EI. The following section describes three popular models of EI.

**Emotional intelligence models.** *The Encyclopedia of Applied Psychology* (Spielberger, 2004) suggests that there are currently three major conceptual EI models: 1) the Salovey-Mayer model, 2) the Bar-On model, and 3) the Goleman model. Salovey, Mayer, and colleagues define EI as the ability to perceive, understand, manage and use emotions to facilitate thinking (Mayer, Salovey, Caruso, & Sitarenios, 2001). The Bar-On Model (1997) describes a cross-section of interrelated emotional and social competencies, skills, and facilitators that impact intelligent behavior. The Goleman model views EI as a wide array of competencies and skills that drive managerial performance (Goleman, 1998; Boyatzis, 2008; McKee, Boyatzis, & Johnston, 2008).

These popular models agree that descriptions, definitions and conceptualizations of emotional-social intelligence have included one or more of the following key components: 1) the ability to recognize, understand and express emotions and feelings; 2) the ability to understand how others feel and relate with them; 3) the ability to manage and control emotions; 4) the ability to manage change, adapt, and solve problems of a personal and interpersonal nature; 5) the ability to generate positive affect; and 6) the ability to be self-motivated. These agreements provide support for the argument that the ability to understand and productively manage emotions is an important contributor to one’s ability to deal with work-related stress that leads to burnout.

**Salovey and Mayer model.** Emotional intelligence was originally defined by Salovey and Mayer (1989) as the “subset of social intelligence that involves the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them, and to
use this information to guide one’s thinking and actions” (p. 189). They conceptualized EI as a relationship between cognition and affect (Brackett, Rivers, & Salovey, 2011). While some researchers historically viewed ‘emotion’ and ‘intelligence’ as being opposed to one another, Salovey and Mayer’s theory of EI suggested the opposite: emotions make cognitive processes adaptive so that individuals can think rationally about emotions (Brackett et al., 2011). The foundation of Salovey and Mayer’s model is that emotions contain information about relationships. They state that EI provides the ability to recognize the meanings of emotions as well as the ability to use them as a basis in reasoning and problem solving. Furthermore, EI involves using emotions to enhance cognitive activities (Mayer, Caruso, & Salovey, 1999).

Although Salovey and Mayer recognized some overlap with Gardner’s (1983) conception of social intelligence, or what is more commonly known as Gardner’s “personal intelligences” (interpersonal and intrapersonal intelligence), Salovey and Mayer’s (1989) model focused more specifically on the “recognition and use of one’s own and others’ emotional states to solve problems and regulate behavior” (p. 189). Furthermore, they viewed the construct of EI as a system of emotion-related abilities comprising four areas of skills, or what they refer to as “branches:” 1) perceiving emotion, 2) using emotions to facilitate thought, 3) understanding emotions and 4) managing emotions (Mayer et al., 2001). According to Mayer et al. (2001), perceiving emotions relates to one’s ability to identify emotions in faces, pictures, etc. Facilitating thought with emotions relates to one’s ability to harness emotional information and directionality to enhance thinking. Understanding emotion relates to one’s ability to comprehend emotional information about relationships and transition from one emotion...
to another. Managing emotion relates to one’s ability to manage feelings and thoughts for personal and interpersonal growth.

Mayer, Salovey, and colleagues repeatedly assert that espousing all four abilities (emotional perception, using emotions, understanding emotions, and emotion regulation) is required to designate a person as emotionally intelligent (Mayer, Salovey, Gomberg-Kaufman, & Blainey, 1991; Salovey & Mayer, 1989; Mayer, Salovey, & Caruso, 2004; Caruso, Mayer, & Salovey, 2001; Salovey & Grewal, 2005). Before any extensive empirical work had been conducted on EI, Salovey and Mayer (1989) also stated that all of the proposed skills did not have to inter-correlate. They reasoned that it was not of utter importance whether the underlying components represented a single factor. Rather, it was more important that regardless of their empirical interdependence, the components were conceptually related. They further argued that all of the emotional skills belong within the EI framework because they involve emotional processing, and together they are needed for a minimum level of competency regarding emotional functioning.

As Salovey and Mayer’s work on EI developed, they made additional attempts to explain how the four skills integrate with one another. Salovey, Mayer, and colleagues (2001) view the four-ability model of EI as forming a hierarchy, with the simplest ability—emotional perception—at the bottom and the most complicated—regulating emotions—at the top. According to Mayer and Salovey (1993), the most demanding skill, emotion regulation, builds upon “lower skills,” such as identifying and understanding emotions.

**Bar-On model.** A second definition of EI was later conceived by Bar-On. According to Bar-On (1997), to be emotionally and socially intelligent is to effectively
understand and express oneself, to understand and relate well with others, and to successfully cope with daily demands, challenges and pressures. Similar to Gardner’s position that intrapersonal ability refers to one’s ability to access one’s emotions, Bar-On (1997) says that intrapersonal ability refers to the ability to be aware of oneself, to understand one’s strengths and weaknesses, and to productively express one’s feelings and thoughts. On the interpersonal level, being emotionally and socially intelligent encompasses the ability to be aware of others’ emotions, feelings and needs and to establish and maintain cooperative, constructive and mutually satisfying relationships. Bar-On (1997) asserted that being emotionally and socially intelligent means to “effectively manage personal, social and environmental change by realistically and flexibly coping with the immediate situation, solving problems and making decisions” (p.14).

**Goleman model.** Although Salovey and Mayer are most frequently credited for introducing EI to the academic world, Goleman’s book, *Emotional Intelligence: Why It Can Matter More than IQ* (1995), brought the concept to the forefront of popular culture (Brackett et al., 2011). In his book, Goleman (1995) described how scientists had discovered a connection between emotional competencies and prosocial behavior; he also declared that EI was “as powerful and at times more powerful than IQ in predicting success in life” (p. 34). Both in the 1995 book and in a later book focusing on workplace applications of EI (Goleman, 1998), Goleman described EI as an array of positive attributes including political awareness, self-confidence, conscientiousness, and achievement motives rather than focusing only on an intelligence that could help individuals solve problems effectively. According to Brackett et al. (2011), Goleman’s
views on EI extended beyond the empirical evidence that was available, and people from all professions began to incorporate EI into their daily vernacular and professional practices.

Goleman, Boyatzis, and McKee (2013) have refined this competency-based EI model over the last two decades and have defined EI as the composite set of capabilities that enables a person to manage him or herself and others. Furthermore, they conceptualize EI as “the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships” (Goleman, 1998, p.317). This EI model includes 12 competencies grouped under four general categories: self-awareness, self-management, social awareness, and relationship management (Boyatzis, 2008; Goleman et al., 2013; McKee et al., 2008). The first two domains determine how well one understands and manages oneself and his or her emotions; the second two describe how well one recognizes and manages the emotions of others, builds relationships, and works in complex social systems (Boyatzis & McKee, 2005).

According to this model, the category of self-awareness is focused on one’s ability to recognize his or her emotions (i.e., emotional self-awareness) (McKee et al., 2008). Individuals high in emotional self-awareness are adept at reading their own emotions and recognizing their impact on others (Boyatzis & McKee, 2005). Individuals with high self-awareness typically know their limitations and strengths, exhibit gracefulness in learning where they need to improve, and welcome constructive criticism and feedback.
The category of self-management includes positive outlook, achievement orientation, adaptability, and emotional self-control (McKee et al., 2008). Positive outlook refers to one’s ability to expect that changes in the future will be for the better. Individuals with strength in achievement have high personal standards and seek continual improvement for themselves and others. Individuals who are highly adaptable are comfortable with ambiguity and demonstrate flexibility to changing situations. Individuals who exhibit emotional self-control are skilled at managing disruptive emotions and impulses (Boyatzis & McKee, 2005; Goleman, et al., 2013).

The social awareness category includes empathy and organizational awareness (McKee et al., 2008). Individuals with empathy are able to attune to a wide range of emotional signals, listen attentively, and grasp the other person’s perspective. Organizational awareness refers to an individual’s ability to detect crucial social networks and read key power relationships in an organization (Boyatzis & McKee, 2005; Goleman, et al., 2013).

The relationship management category includes inspirational leadership, teamwork and collaboration, coach and mentor, influence, and conflict management (McKee et al., 2008). Inspirational leadership refers to one’s ability to guide and motivate others with a compelling vision. Teamwork and collaboration refers to one’s ability to develop and leverage connected relationships in an effort to establish commitment to a collective effort. Coach and mentor refers to one’s ability to provide timely and constructive feedback in an effort to cultivate others’ abilities. Influence refers to one’s ability to use a wide range of tactics to persuade others. Conflict management pertains to
one’s ability to understand different perspectives, resolve differences, and find common goals that everyone can endorse (Boyatzis & McKee, 2005; Goleman, et al., 2013).

**Emotional intelligence and coping.** Despite the fact that groups of individuals share a common work environment with similar job demands, individuals differ in their ability to withstand demands and in their capacity to make effective use of available resources (Leiter et al., 2014). Salovey and Mayer, Bar-On, and Goleman’s theories provide useful information with which to better understand the role of EI as a resource that helps individuals cope with work-related stress that may lead to burnout. In particular, awareness and management of emotions, adaptability, positive outlook, and empathy have been noted as specific EI competencies that may contribute to one’s ability to manage stress.

Concerning positive and negative outlook, the literature suggests that people who have neurotic tendencies (i.e., negative outlook or affectivity) focus on the negative aspects of themselves and their environment and experience greater psychological distress (Moyle, 1995). In contrast, people who maintain a positive outlook, a key EI competency according to McKee et al. (2008), experience greater psychological wellbeing (Hart, 1999). Similar to positive outlook, optimism is another EI characteristic that can influence how individuals perceive and respond to stress. According to Goleman et al. (2013), optimism drives people to see challenges as opportunities rather than threats and leads them to expect that changes in the future will be for the better. Other authors believe that optimism is an important facilitator of emotionally intelligent behavior (Bar-On, 1997) and that when people believe that their actions will lead to positive results, they will be more likely to engage in difficult and uncertain tasks (Staw, Sutton, &
Pelled, 1994). Similarly, Epstein and Feist (1988) claim that individuals with positive attitudes toward life may be at an advantage for solving problems adaptively.

Goleman (1998) asserts that hope, like optimism, is another attribute of EI that can buffer people against apathy and depression, and it strengthens their capacity to withstand defeat and persist in adversity. Hope, according to Boyatzis and McKee (2005), is an emotional state facilitated by clear thoughts about the promise of the future and how to get there. They say that a more hopeful state of mind creates more physiological and emotional resiliency, which facilitates mental and physical preparedness to deal with challenges. Moreover, they cite extant research showing that hope leads to other positive emotions, more positive thoughts, and superior coping abilities (Boyatzis & McKee, 2005). These examples are part of a growing body of literature demonstrating the impact of positive affectivity on behavior, including how positive emotions impact openness and cognitive flexibility, problem-solving abilities, and willingness to experience uncertainty (Boyatzis & McKee, 2005).

Empathy represents another central attribute of EI that may enable a more positive response to stress. Salovey and Mayer (1989) describe empathy as a person's ability to understand someone else's feelings and to re-experience them. Empathy determines the success of social support and is a motivator for altruistic behavior (Salovey & Mayer, 1989). Additionally, empathy is noted as a specific EI competency under the category of social awareness within Goleman et al.’s EI framework (Goleman et al., 2013). Individuals who have a high degree of empathy are able to attune to a wide range of emotional signals (Goleman et al., 2013) and can face challenges with creativity and resilience (Boyatzis & McKee, 2005).
Conclusion

The goal of this literature review was to help shape the theoretical and methodological underpinnings of this study (Ravitch & Riggan, 2012). An in-depth review of the literature suggests that four main theoretical constructs support the conceptual framework for this study—occupational stress, burnout, coping, and emotional intelligence.

First, an exploration of the occupational stress literature helps to provide an understanding of the causes and consequences of work-related pressures and challenges. Specifically, the Job Demands-Resources Model, Conservation of Resources Theory, and Psychological Contract Theory provide insights into the causes and implications of occupational stress. Psychological Contract Theory is similar to the Job Demands-Resources Model in that violations of a psychological contract may place additional demands on an employee than they originally expected, creating an imbalance between demands on the individual and resources that individual has to deal with those demands. The Conservation of Resources Theory is also similar to the Job Demands-Resources Model in that both emphasize the importance of the capacity and use of individual resources to cope with stress. Furthermore, researchers have found links between all three occupational stress theories and burnout.

Second, an understanding of one of the most dominant constructs in recent occupational stress literature—burnout—is central to this study. Research over the last forty years has provided rich information with which to understand burnout, its causes and consequences, and effective methods for measuring the syndrome. Evidence suggests that there is support for top-down intervention strategies employed by organizations
(Demerouti, 2014), but little is known about how individual-level strategies, such as one’s ability to harness EI resources, support people in preventing and managing burnout.

Third, an understanding of the coping literature provides relevant context with which to understand how individuals deal with occupational stress. Emotion-focused coping relates to how an individual perceives and manages emotions and emotional information when presented with a stressor, whereas problem-focused coping relates to how an individual attempts to alter the person-environment relationship causing the distress.

Finally, Salovey and Mayer, Bar-On, and Goleman’s EI models provide useful information with which to understand the role that EI plays in one’s ability to effectively use emotion-focused coping strategies. In addition to EI being a significant differentiator between superior and average leaders, the literature suggests that EI competencies may serve as a valuable resource that physician leaders can leverage to counterbalance their stress and prevent burnout. Specifically, research indicates that awareness and management of emotions, adaptability, positive outlook, and empathy are specific EI competencies that may contribute to one’s ability to manage stress (Boyatzis & McKee, 2005).

Having described the main bodies of literature that support the conceptual framework for this study, the following chapter describes how I used these concepts to look directly at stress, burnout, and emotional intelligence in executive level physician leaders.
CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

Chapter 3 discusses this study’s research methodology. In this chapter, I summarize the purpose of my study and explain the logic for why I chose a quantitative and qualitative methodology design for this dissertation. Subsequently, I provide further detail regarding the participant selection and recruitment processes and the data collection methods, including an overview of the qualitative interview techniques and the quantitative instrument. I conclude this chapter by describing how the data was analyzed, and I provide a discussion of how I addressed validity concerns.

Having established that occupational stress contributes to burnout and affects emotional and physical wellbeing and leadership effectiveness, the purpose of my study was to gain insight into if and how executive level physician leaders, specifically those in the Chief Medical Officer (CMO) role, experience occupational stress and burnout. I was also interested in understanding if possession of certain emotional intelligence (EI) competencies contribute to a CMO’s ability to deal with work-related stress. This study was designed to collect data to answer the following research questions:

**Question One:** Do Chief Medical Officers perceive that work-related stress impacts their wellbeing and/or leadership effectiveness? If so, how?

**Question Two:** Do Chief Medical Officers perceive that emotional exhaustion, cynicism, and/or diminished professional efficacy impact their leadership effectiveness?

**Question Three:** Do Chief Medical Officers perceive that emotional intelligence competencies contribute to their ability to deal with work-related stress? If so, how?
Overview of Research Methodology

To achieve the goals of this study, I used a mixed methods approach that employs qualitative interviews and a quantitative instrument. Utilizing a research approach that employs multiple methods of collecting data is common in qualitative research (Maxwell, 2013), and my reasons for using a mixed methods approach for this study are threefold.

First, this approach utilized triangulation techniques that enabled me to analyze quantitative and qualitative data as a check on one another and to assess whether the two methods support a single conclusion (Maxwell, 2013). A second purpose for using a mixed methods approach was to obtain information about different aspects of the phenomenon I was studying. This approach, referred to by Greene (2007) as complementarity and expansion, focuses on using different methods to broaden the range of aspects or phenomenon rather than to simply strengthen particular conclusions about a phenomenon. Finally, a mixed methods approach was used to provide divergent perspectives, leading to a more complex understanding of the phenomenon studied (Greene, 2007).

My choice of using qualitative methods was aligned with my interest in exploring interviewees’ experiences with work-related stress and their examples of how they deal with stress. My belief was that a qualitative approach would help me understand participants’ deep meaning with respect to this phenomenon through their highly personalized and richly detailed personal examples (Maxwell, 2013). My choice of including a quantitative instrument was based on my desire to measure the degree of perceived stress, emotional exhaustion, cynicism, and professional efficacy and to examine the relationship among these variables.
Participants

In this section, I describe my participant selection strategy, sample size, criteria for selecting participants, and participant recruitment approach. I conclude with a description of the personal characteristics of the final participant pool.

**Participant selection strategy.** The participant selection strategy for this study was based on the methods of purposeful selection espoused by Patton (2002) and Maxwell (2013). Purposeful selection is a strategy whereby particular settings, individuals, or activities are selected deliberately to provide information that cannot be obtained from other sources. My decision to intentionally select only Chief Medical Officers as the subjects of my study was guided by my desire to study a group of executive level physician leaders with similar roles and responsibilities. With the understanding that there is some variation in CMOs’ responsibilities, my personal belief is that the CMO role carries comparable executive level demands and pressures that may trigger similar degrees of stress in different individuals. I felt that this level of homogeneity allowed me the best opportunity to gain insight into the issues that were central to my study (Patton, 2002).

**Sample size.** A total of 35 Chief Medical Officers were purposefully selected for this study (Patton, 2002). I determined the sample size based on my objective, which was not to gauge the perceptions of a large number of physician leaders in general but rather to study a specific phenomenon in the particular context of CMOs. According to Patton (2002), there are no rules for sample size in qualitative inquiry. I believe that the validity, meaningfulness, and insights generated from this approach are more related to the information richness of the cases selected and my observational and analytical
capabilities than they are related to sample size (Patton, 2002). Therefore, my goal was to focus on a manageable number of participants who could provide me with meaningful and rich information that would best enable me to answer the study’s research questions (Maxwell, 2013).

Criteria for selecting participants. I used two criteria to guide me in the selection of study participants: 1) the participant’s role and size of organization with which they work; and 2) my ability to access the participant. Each of these criteria is discussed in greater detail below.

First, an important requirement for inclusion in the research sample was the participant’s role and size of organization with which they work. More specifically, the following criteria were used to select participants: 1) physician leaders who serve in full-time Chief Medical Officer (CMO) roles, 2) CMOs who work for hospitals with $100M+ net patient revenue, 3) CMOs who are 40 years old or older, and 4) individuals who have been in their CMO role for 12+ months. This stratified sampling approach was intended to achieve as homogenous a sample as possible. Additionally, I believe the perceptions of individuals who fit these criteria provided me with the best opportunity to gain insight into the issues that are central to my study (Patton, 2002).

Second, my ability to access interviewees was a requirement for inclusion in the research sample. To source and recruit participants, I engaged my personal and professional network to introduce me to potential study participants. Additionally, I sourced and recruited participants via a professional association (American Association for Physician Leadership) of which CMOs are known to be affiliated. Using this
approach, I was able to gain access to CMOs who attended a professional association conference.

When selecting participants, I did not include or exclude individuals from participating in the study based on their performance, expected level of stress, degree of emotional intelligence, or other extenuating factors outside of the aforementioned selection criteria. I chose this approach because I wanted to ensure a certain level of diversity amongst the study population, and also because I wanted to cast a fairly broad net with which to recruit participants. Fortunately, the strength of my network prevented me from having to make sacrifices to my established participant selection criteria. In this sense, convenience was a factor I considered “after strategically deliberating how to get the most information of greatest utility from the limited number of cases to be sampled” (Patton, 2002, p. 242).

**Participant recruitment approach.** Once potential participants were identified, I sent them an introductory email to establish their willingness to participate. I clearly indicated the purpose of my research, its timing, and an overview of my requirements. Regarding this last point, I emphasized that I was seeking participants who are physician leaders serving in a fulltime CMO role for a hospital with $100M+ net patient revenue, 40 year old or older, and have been in their CMO role for 12+ months. For individuals who provided a positive confirmation of their role and willingness to participate, I sent a follow up email to schedule their interview.

**Personal characteristics.** The personal characteristics of CMOs who participated in this study are shown in Table 1. Male CMO’s (91%) predominated compared to their female counterparts (9%). The age of participants indicates the largest group of
individuals (69%) was in the 56 and over age range. The 55 and under group represented 31%. Finally, participants were asked to indicate how many years they have been in the CMO role. The percentage of CMOs who have been in their role five years or less was 63% compared to those who have held the position for over five years, which represents 37% of the participants.

Table 1. Participant Demographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Participants</th>
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<tbody>
<tr>
<td></td>
<td>N = 35</td>
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<tr>
<td>Gender</td>
<td></td>
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<tr>
<td>Male</td>
<td>32 91</td>
</tr>
<tr>
<td>Female</td>
<td>3 9</td>
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<tr>
<td>Age</td>
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<td>55 and under</td>
<td>11 31</td>
</tr>
<tr>
<td>56 and over</td>
<td>24 69</td>
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<tr>
<td>Years in CMO role</td>
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<tr>
<td>5 years and under</td>
<td>22 63</td>
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<tr>
<td>Over 5 years</td>
<td>13 37</td>
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Data Collection Methods

To achieve the goals of this study, I collected qualitative and quantitative data. As the researcher, I was the only person involved in collecting data. In the following sections, I describe the specific steps I took to collect data. I include details related to the interview process I followed to collect qualitative data as well as a description of the instrument I used to collect quantitative data.

Qualitative data collection. Due to the exploratory nature of this study, I chose to collect qualitative data to answer the research questions. Qualitative research is useful for understanding key individuals, such as leaders of an organization (Remler & Van Ryzin, 2010). This choice was aligned with my interest in wanting to understand, from
interviewees’ perspectives, the research questions. My belief was that this approach would allow me to elicit interviewees’ deep thinking and meaning with respect to this topic through their highly individualized and richly detailed examples (Maxwell, 2013). Given that there is relatively little research about this topic (i.e., EI competencies that contribute to a physician leader’s ability to deal with stress), my goal was to gain a unique understanding of this phenomenon through the collection of qualitative data.

**Interview format.** To collect qualitative data, I conducted 60-minute interviews with each participant. The interviews were conducted over a three-month period. Two interviews were conducted in person. Due to time and geographic constraints, the remaining 33 interviews were conducted via telephone. I believe this approach was appropriate given that research demonstrates only a marginal difference between in person and telephone interviews (de Leeuw & van der Zouwen, 1988).

Interviews were scheduled directly with participants or via his or her assistant following the participant’s approval. To schedule the interview, I sent the participant an Outlook meeting invitation with the time of the interview and the dial-in instructions. Participants did not incur any costs for the call, and access was as easy as possible. A few days prior to the scheduled appointment, I sent a reminder email with the intent of building rapport prior to the interview.

Each interview was approached as a confidential and secure conversation between the participant and me (Lofland & Lofland, 1995). I sought to create an environment that was conducive to the interviewee openly sharing his or her perceptions of EI competencies that contribute(d) to their ability to deal with work-related stress, the
subject of my study. In doing so, I kept in mind the differences between a conversation and an interview, including the objectives and my own role (Rubin & Rubin, 2005).

At the start of the interview, I provided an overview of the interview format to the participant. I let him or her know that the interview would not exceed 60 minutes and asked for his or her permission to record the interview. I emphasized that the interview recording would be destroyed and the transcript would be rendered anonymous so that no one would be able to identify them. Additionally, I emphasized that only themes would be included in my research, and any direct quote would not be linked to a specific individual. I allowed the interviewee the opportunity to ask questions before getting started.

All interviews were captured using a digital hand-held audio recorder, and I also took handwritten notes during each interview. Immediately following each interview, I anonymized and password protected all recordings before sending the files to a third party for transcription. Transcriptions were returned to me on an ongoing basis over the three-month data collection period. Once received, I also password protected all transcriptions.

**Interview protocol.** I designed an interview protocol (Appendix A) that was intended to elicit responses that would answer the study’s research questions. Prior to commencing interviews, the interview protocol was tested via two proxy interviews with PennCLO program colleagues. This allowed me to experiment with the interview protocol and refine the questions. My dissertation committee also provided guidance that allowed me to generate a highly useful interview protocol.
I followed a semi-structured interview format, which is described by Remler and Van Ryzin (2010) as a set of open-ended questions, accompanied by probes, which help guide or structure the discussion. The advantage to using this type of interview format was that the interview questions were designed to allow for a tone of conversation and informality during the interview (Eriksson & Kovalainen, 2008). I used a standard questioning format in combination with an interview guide approach. Specifically, I asked many of the same open-ended questions to all interviewees while keeping in mind general areas of information that I wanted to collect from each individual. I then adapted my questions to capture information that was important to each individual (Patton, 2002). As a result, my interview protocol was sufficiently flexible that it allowed me to be responsive to issues raised spontaneously by the interviewee (Legard, Keegan & Ward, 2003).

The interview approach utilized two modified Behavioral Event Interviews (BEI) within the semi-structured interview process. Behavioral Event Interviews, also known as Critical Incident Interviews (CII), are focused on extracting an interviewee’s stories for a number of recent events (Boyatzis, 2008). This approach allowed me to structure the interview using questions and probes oriented toward gaining rich, behaviorally-centered descriptions about the participants as they relate to the research topic (Spencer & Spencer, 1993). Validity of the technique for obtaining descriptions of events and a person’s behavior has been reported by Motowidlo et al. (1992) and McClelland (1998).

During the first part of the interview, I followed my interview protocol in an attempt to ensure that the interview remained focused on my research questions in order to facilitate the comparison and extraction of themes across interviewees (Patton, 2002).
In the second part of the interview, I guided the interviewee toward topics that emerged from my research as potential findings. I asked the interviewee to comment on these topics, confirming or disconfirming examples from their own experience. To prevent undesirable consequences associated with reflexivity—the fact that interview participants are influenced by the interviewer and the interview situation (Maxwell, 2013)—I avoided leading questions. More importantly, I sought to understand how I may have influenced what the interviewee said and was aware of how this may have affected the validity of the inferences I drew from the interview (Ravitch & Carl, 2016).

I had two objectives with respect to collecting qualitative data. First, the semi-structured interview process enabled me to collect data with which to view and analyze participants’ perceptions of the impact of work-related stress on their wellbeing and leadership effectiveness. Additionally, this approach allowed me to explore the various aspects of EI that contribute to participants’ ability to deal with work-related stress.

**Quantitative data collection.** In addition to collecting qualitative data, I chose to use an instrument that would enable me to collect quantitative data. My goal with this approach was twofold. First, I wanted to measure the degree of perceived stress, emotional exhaustion, cynicism, and professional efficacy and examine the relationship between these variables. Secondly, I wanted to add meaning to and deepen my understanding of the qualitative data by triangulating the two data sets.

To collect quantitative data, I utilized the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1981) as the instrument to assess whether or not CMOs experience burnout, and if so, the dimension(s) along which they perceive to experience burnout—emotional exhaustion, cynicism, and/or diminished professional efficacy. I chose to use
this instrument because it is considered the definitive measure of burnout used by many organizations and researchers to assess how employees experience their work (Maslach, et al., 1981). The dominant structure for the items is a statement of a feeling that is attributed to work. The close association between burnout and work differentiates it from more general emotional states, such as depression, which tend to permeate other aspects of life. Thus, the MBI was used to assess burnout as a result of work-related stress.

Several studies of the MBI support its internal reliability (Iwanicki & Schwab, 1981; Maslach & Jackson, 1981). Iwanicki and Schwab’s (1981) study reported Cronbach alpha ratings of 0.90 for emotional exhaustion, 0.76 for cynicism, and 0.76 for professional efficacy; very similar ratings were reported by Maslach and Jackson (1981)—0.90 for emotional exhaustion, 0.79 for cynicism, and 0.71 for professional efficacy. Time periods of a few weeks, 3 months, 8 months, and 1 year have been used for test-retest reliability (Maslach & Jackson, 1981). Scores in the few week range were the highest (0.60 – 0.82), whereas scores in the year range were the lowest (0.57 – 0.60) (Maslach & Jackson, 1981). Overall, longitudinal studies of the MBI have found a high degree of consistency within each subscale that does not seem to significantly decline from a period of a few weeks to a year. This stability is consistent with the purpose of the assessment to measure an enduring state (Maslach & Jackson, 1981).

Although there is an MBI instrument that is designed specifically for human services professionals, I chose to use the MBI General Survey (MBI-GS), which is designed for workers in other occupations. The MBI-GS defines burnout as a crisis in one’s relationship with work rather than as a crisis in one’s relationships with service recipients at work. This version is recommended for occupations without direct personal
contact with service recipients (e.g., patients) or with only casual contact with service recipients (Maslach, et al., 1981). Therefore, I believe using the MBI-GS for this study was most appropriate given the fact that study participants—executive level physician leaders—primarily work in a non-human services capacity.

I used the MBI-GS to measure participants’ relationships with their work on a continuum from engagement to burnout. Maslach et al. (1988) describe engagement as an energetic state in which one is dedicated to excellent performance at work and confident in one’s ability to be effective. In contrast, the authors describe burnout as a state of exhaustion in which one is cynical about the value of one’s occupation and doubtful of one’s capacity to perform. Each aspect of the MBI was measured by a separate subscale. The emotional exhaustion subscale assessed feelings of being emotionally overextended and exhausted by one’s work. The cynicism subscale measured the extent to which participants lack involvement in or dedication to their work. The professional efficacy subscale assessed feelings of competence and successful achievement in one’s work.

The instrument is a 16-item questionnaire that uses three subscales to measure along the engagement-burnout continuum: 1) emotional exhaustion, 2) cynicism, and 3) professional efficacy. The frequency with which the participant experienced feelings related to each subscale was assessed using a six-point, fully anchored response format. Each item asked the participant to read a statement concerning job-related feelings and indicate the frequency with which the statement is true for them. The scale ranges from 0 (i.e., I never feel this way) to 6 (i.e., I feel this way every day).

I added two customized questions to the survey to obtain information not discussed in the interviews: 1) age, and 2) perceived current level of stress. I chose to
collect age data so that I could later analyze differences in perceived stress levels and burnout between different age categories. Regarding perceived current level of stress, I included a question that asked participants to describe, on a scale of 1 – 10, the level of work-related stress they were experiencing at the time of completing the survey. I chose to create a 10-point scale that mirrors that of the universal pain scale with 1-2 = mild, 3-4 = moderate, 5-6 = severe, 7-8 = very severe, and 9-10 = worst possible. I believed this scale would be familiar to participants given their previous clinical experience.

Data Analysis

The main goal of the data analysis was to address the study’s research questions. This section describes the approaches I used to analyze qualitative and quantitative data. First, I describe the strategies I used to analyze the qualitative data and quantitative data independent of each other. I then describe how I triangulated the data to determine if the methods support a single conclusion.

**Qualitative data analysis.** I used two thematic analysis strategies to analyze the qualitative data: 1) an inductive thematic analysis strategy and 2) a deductive thematic analysis strategy using the Emotional and Social Competency Inventory (ESCI) coding heuristic. My objectives with the inductive thematic analysis was to capture participants’ perspectives as part of the reality that I wanted to understand as well as to broaden my understanding of certain contexts within which participants act and the influence these contexts had on their actions (Maxwell, 2013). My objectives with the deductive thematic analysis were to use an empirically supported and structured approach using the ESCI model to further analyze the data and add meaning to the inductive results. I believe both of these approaches were appropriate due to the social phenomenological nature of the
research questions. Social phenomenology takes the view that people living in the real world of daily life are able to ascribe meaning to a situation and then make judgments (Schutz, 1967). The primary goal of this study was to explore the subjective meaning of experiences described by CMOs. As such, the inductive and deductive approaches consisted of searching for themes that emerged as being important to the description of the phenomenon (e.g., CMOs’ experiences with work-related stress and EI competencies that contribute to their ability to deal with stress).

**Inductive thematic analysis.** An inductive thematic analysis approach was used to recognize patterns within the data and identify emerging themes that ultimately became the categories for the analysis (Boyatzis, 1998). I completed the inductive thematic analysis in two distinct phases: 1) a divergent analysis, and 2) a convergent analysis. These phases are discussed below.

**Divergent thematic analysis.** Given the nature of the phenomenon I was studying, a divergent analysis was an effective way to begin the process of making meaning of the data I had collected. A divergent analysis approach uses lenses that are not developed inductively but rather defined *a priori* and generated intuitively by the researcher based on an understanding of the research topic and what they think is important (Maxwell, 2013).

I worked with my dissertation committee chair to generate a set of possible interpretive lenses, and I ultimately decided on two interpretive lenses based on my intuition of what would be the most useful for my study: 1) *language*, and 2) *researcher as instrument*. I confirmed these choices with my committee chair before using the lenses to code the data. *Language* refers to data in which participants chose to communicate in a
particular way to articulate and/or add meaning to their message. *Researcher as instrument* refers to unique researcher characteristics believed to have the potential to influence the collection and analysis of empirical data (Pezalla, Pettigrew, and Miller-Day, 2012).

I had two goals with regard to analyzing the data through these two interpretive lenses. My first goal was to deepen my understanding of participants’ meaning by exploring the language they used to describe their experiences. My second goal was to better understand the factors that influenced me as a researcher, as well as to understand how I may have influenced the research process.

With respect to my first goal, I was able to enhance my understanding of participants’ descriptions and stories by exploring the contextual layers of their speech. By viewing the data through the lens of *language*, I found that participants often chose to use metaphors to emphasize or add clarification to a particular point. The way in which participants expressed their emotions during the interview also added to my understanding of their meaning. Finally, I found that participants frequently expressed themselves through advice for others as a way to emphasize their points.

With respect to my second goal, my intention was to remain reflexive about my subjectivities and my assumptions so that I can transparently present any biases and minimize their effect on my representations of the participants and their stories. By viewing the data through the *researcher as instrument* lens, I became aware of the fact that many participants’ descriptions of how they experience and deal with work-related stress resonated with me on a personal level. This is important because it enables me to better understand potential influences on my analyses. Additionally, with respect to
understanding my influence as a researcher, I became aware of the fact that the conversational tone of the interview enabled participants to feel comfortable and open up with detailed stories and descriptions of how they experience work-related stress. Additionally, several participants experienced insights during the interview due to the nature of the discussion.

I coded all transcribed interviews using the aforementioned lenses. I then used the results of the divergent analysis to inform my convergent analysis. In doing so, I developed several codes from the divergent analysis that were used throughout the convergent analysis process.

Convergent thematic analysis. A convergent thematic analysis process involves the researcher interpreting the meaning of the qualitative data after obtaining the findings and constructing a theory after the discovery of the results (Boyatzis, 1998). The convergent analysis I performed is akin to what Corbin and Strauss (2008) refer to as open coding. Corbin and Strauss (2008) describe the process of coding as “opening up” the data to uncover the ideas it holds. Similarly, my intention with the convergent analysis was to use codes to divide the data into segments in order to interpret them individually and collectively.

I completed the convergent thematic analysis in three stages. Boyatzis (1998) proposes three stages to inductive data analysis in which stage one includes deciding on sampling and design issues and selecting subsamples; stage two includes reducing the raw information, identifying themes within subsamples, comparing themes across subsamples, creating a code, and determining the reliability; and stage three includes
applying the code to the remaining raw information, determining validity, and interpreting results. These steps are briefly summarized below:

**Step One:** In the first cycle of coding, I identified 50 descriptive codes based on patterns emerging from my initial reading of the transcripts.

**Step Two:** In the second cycle of coding, I re-read the transcripts and grouped the descriptive codes into eight pattern codes, or themes, to simplify my analysis of the data.

**Step Three:** After the two cycles of coding were complete, I developed the final grouping of three major categories, eight themes, and 26 sub-themes.

The convergent analysis built on the divergent analysis which preceded it. My goal with respect to the convergent analysis was twofold. My first goal was to comprehensively capture all the recurring patterns in the data and group them in meaningful categories. My second goal was to organize these categories in a way that was useful for reflecting on their relationship to the study’s research questions, with the goal of extracting significant findings from the data.

The first cycle descriptive codes allowed me to order the data according to a set of categories that I chose. I selected these categories based on the insights I gained from the divergent analysis as well as from my recognition of patterns in the data. In the second cycle of coding, I re-read the transcripts and grouped descriptive codes into eight pattern codes, or themes, to simplify my analysis.

After the two cycles of coding were complete, I organized the data in a manner useful for my reflection on the study’s findings. Specifically, I placed the coded data into
a framework that included three major categories, eight themes, and 26-sub-themes. The framework was developed inductively and represents my own thinking and not that of the interviewees.

**Deductive thematic analysis.** After completing the inductive thematic analysis through multiple readings of the data, I chose to also employ a deductive thematic analysis approach to look for specific emotional and social intelligence behaviors. The difference between inductive analysis and deductive analysis is the manner in which qualitative data is coded. Generally, an inductive coding approach (also referred to as *emic, insider, or bottom-up*) stays as close to the data as possible by using participants’ words to label data segments rather than researcher-created words or phrases (Ravitch & Carl, 2016). In comparison, a deductive coding approach (also referred to as *a priori, etic, or top-down*) involves reading the data and looking for something specific (Ravitch & Carl, 2016). By completing the inductive analysis prior to the deductive analysis, the results of the thematic analysis emerged from the transcripts independent of the deductive analysis and were not influenced by the *a priori* coding heuristic used for the deductive analysis.

The deductive analysis was completed using the Emotional and Social Competency Inventory (ESCI) coding heuristic as the *a priori* orienting construct. The ESCI is intended to assess emotional intelligence competencies (i.e., one’s ability to recognize, understand, and use emotional information about oneself) and social intelligence competencies (i.e., one’s ability to recognize, understand and use emotional information about others) (Boyatzis, 2009). The ESCI coding heuristic is based on a competency model which includes 12 competencies grouped under four general
competency clusters: self-awareness, self-management, social awareness, and relationship management. The first two domains determine how well one understands and manages oneself and his or her emotions; the second two describe how well one recognizes and manages the emotions of others, builds relationships, and works in complex social systems (Boyatzis, 2008; Goleman et al., 2013; McKee et al., 2008; Boyatzis & McKee, 2005). Each ESCI competency includes five or six behavioral indicators, resulting in a total of 68 behavioral indicators, which are the unit of analysis used by the tool.

My original research design did not include use of the ESCI coding heuristic to analyze the qualitative data. Rather, this decision arose as a result of my initial review of the interview transcripts, which revealed that there was sufficient detail to support the use of the tool. Following a training session with Dr. Annie McKee, my dissertation committee chair who was also centrally involved in the original research leading to the development of the ESCI tool, I coded the transcripts using the ESCI behavioral indicators. This process involved re-reading the transcripts and assigning codes at the behavioral indicator level within one competency at a time. For example, I read through all 35 transcripts and assigned behavioral indicator level codes for the self-awareness competency. I then followed the same process for the achievement orientation competency, then the adaptability competency, and so forth for all 12 ESCI competencies. This approach enabled me to focus on identifying behaviors for each specific competency before moving on to the next.

After completing the deductive coding process, I further analyzed the results by counting the total number of occurrences of each behavioral indicator and summarizing
the data at the competency level and the competency cluster level. I also identified the total number of participants who reported each behavioral indicator and summarized the data at the competency level and the competency cluster level. This approach allowed me to analyze the strength of each competency. Converting the qualitative data into a quantitative data set also provided information with which to compare the quantitative results of the ESCI coding process with the quantitative results of the Maslach Burnout Inventory (MBI). This analysis process is discussed in the quantitative data analysis section below.

**Inductive thematic analysis compared to ESCI coding of data.** After completing the deductive analysis, I compared the results of the inductive thematic analysis to the results of the ESCI coding of data. My primary objective for doing so was to assess the relationship and degree of alignment between the results of a “bottom up” (i.e., inductive) coding approach and a “top down” (i.e., deductive) coding approach. I felt that understanding the relationships and degree of alignment would add depth to the meaning of the qualitative data and strengthen the study’s findings.

To assess the relationship between the two data sets, I first created a table showing all inductive themes, sub-themes, and corresponding definitions as well as all ESCI competencies and corresponding definitions. I then grouped definitions that I believed to have a high degree of similarity and compared the results of the two data sets. For example, the inductive coding of data indicated a strong presence of the theme *self-insight*, which is akin to *self-awareness* in the ESCI model. The two are similar in that they both have to do with one’s understanding and awareness of his or her emotions,
skills, and abilities. By grouping similar definitions, I was able to see the relationship between the inductive coding definitions and the ESCI competency definitions.

After analyzing the relationships between the definitions, I was able to isolate and further analyze the data with the goal of assessing the degree of alignment between the two data sets. To assess alignment, I chose to compare the total percentage of participants receiving a specific inductive code with the total percentage of participants receiving an ESCI competency-level code. For example, the thematic analysis found that 89% of all participants reported examples of self-insight as they discussed dealing with a stressful experience. Similarly, the ESCI coding of data found that 89% of all participants reported examples of the emotional self-awareness competency as they discussed dealing with a stressful experience.

**Quantitative data analysis.** The primary method of analysis for this study was designed to focus on a deep understanding of the qualitative data. I chose to also collect and analyze quantitative data to add further depth to the understanding of the qualitative data and to aide in answering the study’s research questions. Specifically, I wanted to measure the degree of perceived stress experienced by participants and its relationship to the three dimensions of burnout—emotional exhaustion, cynicism, and professional efficacy. The quantitative data analysis consisted of analyzing two separate quantitative data sets independent of each other: 1) MBI data and 2) ESCI data. In this section, I discuss the analyses performed on each data set. I then discuss how the MBI data was compared to the ESCI data.

**MBI data analysis.** The MBI survey closed at midnight on Wednesday, February 17, 2016. After exporting the data into Excel, it was downloaded into SPSS, a statistical
software program. A series of descriptive statistics and inferential statistics were conducted to analyze the data.

First, means and standard deviations were calculated for four key variables: 1) stress, 2) emotional exhaustion, 3) cynicism, and 4) professional efficacy. A Pearson correlation was then run to test whether there is a relationship between stress and the three dimensions of burnout—emotional exhaustion, cynicism, and professional efficacy. A second Pearson correlation was run to assess the relationship amongst all four variables. A Spearman correlation was then run, taking into account years in the CMO role, age, and their relationships with the four variables of stress, emotional exhaustion, cynicism, and professional efficacy. I then ran t-tests to check for mean differences amongst the groups. The first t-test was performed based on years in CMO role (5 years or less, and greater than 5 years). A second t-test was performed based on CMO age (55 years and under, and 56 and over). A step-wise regression was used to determine whether stress levels could be predicted using the variables of cynicism, emotional exhaustion, and professional efficacy.

**ESCI data analysis.** Upon completion of the deductive data coding process, I counted the number of occurrences of each behavioral indicator within each ESCI competency. Due to the categorical nature of the data, a frequency chart was used to show which competency clusters and competencies yielded the highest counts during the interviews. Frequency charts were also created for two categories—years in CMO role and CMO age.

**MBI quantitative data compared to ESCI quantitative data.** After completing the MBI data analysis and the ESCI data analysis independently, a Spearman correlation was
run to test whether there is a relationship between the ESCI total scores and the four variables on the MBI—stress, emotional exhaustion, cynicism, and professional efficacy. The ESCI data was collapsed into two categories, and a t-test was performed to check for differences amongst those who scored from 0-11 on the ESCI and those who scored 11 and above.

**Validity Concerns and Mitigation**

Due to the exploratory nature of this study, it is important to understand the steps I took to mitigate the risk of validity concerns. There were three types of threats to validity that I identified in relation to my study: participant selection, researcher bias, and response bias on the MBI. Although I believe none of these threats compromised my findings, some may have limited their scope. However, my awareness of these threats has allowed me to limit their impact. I address each of the threats in further detail below and describe steps I took to mitigate risks inherent in this type of exploratory study.

Regarding participant selection, I chose to use a purposeful sampling strategy to select a small number of individuals. This approach offers no guarantee that their views are indicative of the broader CMO population. I have dealt with this risk by clearly focusing the purpose of my study, which was not to generalize results to a wider population but rather to answer the study’s research questions within the context of a small number of participants. By using this approach, I intend to leverage this study’s results to create a meaningful platform from which future studies and practical interventions can follow.

The second limitation, researcher bias, is related to my role as a research instrument and how my interactions with participants and interpretations of their
responses were influenced by my preexisting values, beliefs, and expectations (Maxwell, 2013). Like many of the individuals who participated in this study, I too have experienced high degrees of stress as a result of raising a family while working full-time and pursuing a doctorate full-time. I took several steps throughout the data collection and analysis process to understand my biases and mitigate the risk of any potential threats. First, I sought to remain highly aware of my own beliefs about what causes stress as well as productive and unproductive methods for dealing with stress. Second, I used active listening techniques and exploratory follow-up questions throughout the interviews to further understand participants’ responses. Finally, I used the divergent thematic analysis to analyze the qualitative data using the lens of researcher as instrument. This process helped me understand and remain aware of my personal characteristics that may influence the collection and analysis of empirical data (Pezalla et al., 2012). By taking the aforementioned steps, I believe I was able to adequately minimize the threat of researcher bias by remaining open to the themes that emerged from the data.

The third limitation, response bias on the MBI, has to do with potential influences on participants’ responses to the survey questions. To minimize response bias on the MBI, I followed several test setting recommendations suggested by the survey designers (Maslach et al., 1986). First, I asked participants to complete the survey in private, focusing their time and attention on answering the questions honestly. Second, I reinforced participant anonymity by assigning a unique participant identification number that was not personally revealing. This allowed me to identify responses for each individual without including their personal identification in the broader data set. Finally, to minimize the reactive effect that may occur due to personal beliefs or expectations
about burnout, I labeled the test form as “CMO Research Study” rather than “Maslach Burnout Inventory.” This approach was intended to ensure that the participants were unaware that the MBI-GS was used as a burnout measure and to minimize any sensitivity to the general issue of burnout.

**Conclusion**

The purpose of chapter 3 was to describe the methods I used to examine this study’s research questions. As discussed, I collected qualitative data using semi-structured Behavioral Event Interviews to assess: 1) whether CMOs perceive work-related stress as impacting their wellbeing and/or professional effectiveness, and if so how; and 2) whether CMOs perceive EI competencies as contributing to their ability to deal with work-related stress and/or burnout, and if so how. I also collected quantitative data using the MBI-GS to measure perceived levels of stress and whether CMOs experience burnout, and if so, along which dimensions. This approach allowed me to: 1) analyze quantitative and qualitative data as a check on one another and to assess whether the two methods support a single conclusion (Maxwell, 2013); 2) obtain information about different aspects of the phenomenon being studied; and 3) analyze divergent perspectives, leading to a more complex understanding of the phenomenon being studied (Greene, 2007).

In Chapter 4, I present the results of this study. I then discuss my interpretations of the study’s results and present implications for future research and implications for practice in Chapter 5.
CHAPTER 4: RESULTS

In Chapter 3, I described the research methodology that guided my completion of the study. In this chapter, I present the results of the study. Specifically, this chapter includes a report of the following results: 1) inductive thematic analysis results, 2) deductive thematic analysis results using the Emotional and Social Competency Inventory (ESCI), 3) quantitative data analysis results, and 4) inductive thematic analysis results compared with ESCI coding of the qualitative data.

Chapter 4 does not include an elaboration or interpretation of the data. I simply aggregate and report the data that emerged as a result of the qualitative and quantitative data collection methods. In Chapter 5, I further analyze this data to draw findings from it. These findings include my personal understanding of the meaning of these results in relation to the study’s research. Chapter 5 also includes my reflections on the findings’ implications for practice and future research.

**Inductive Thematic Analysis Results**

As described in Chapter 3, I completed the inductive thematic analysis in two distinct phases. I first completed a divergent analysis using two interpretive lenses to code the qualitative data. I then used the results of the divergent analysis to inform my convergent analysis. In doing so, I developed several codes from the divergent analysis that were used throughout the convergent analysis process. The results of the divergent and convergent analyses are discussed in greater detail in the following sections.

**Divergent thematic analysis.** I began the process of making meaning of the qualitative data by completing a divergent analysis. To do so, I selected two interpretive lenses: *language* and *researcher as instrument*. *Language* refers to data in which
participants chose a particular way to articulate and/or add meaning to their message.

*Researcher as instrument* refers to unique researcher characteristics believed to have the potential to influence the collection and analysis of empirical data (Pezalla et al., 2012). I used these two lenses to code the 35 transcribed interviews.

Table 2 presents the results of the divergent data analysis. In the table, the number of references that I coded related to each interpretive lens is indicated in the *# references* column. For example, the interpretive lens *language* was associated with a total of 107 references from across all interviews. Each interpretive lens is defined by sub-themes that were created after I had completed the divergent coding process. In that sense, the sub-themes emerged as a way of condensing the data related to an interpretive lens. Next to each sub-theme, I indicate the number of references that relate to that sub-theme. For example, the sub-theme of *advice* nested under the interpretive lens of *language* was associated with a total of 66 references from across all interviews. The total number of participants and total percentage of participants who made references to each sub-theme are noted in the two columns to the right.

**Table 2. Results of Divergent Thematic Analysis**

<table>
<thead>
<tr>
<th>Interpretive Lens Theme 1: Language</th>
<th># References</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Sub-theme: Advice</td>
<td>66</td>
<td>26</td>
</tr>
<tr>
<td>1.2 Sub-theme: Expressed Emotion</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>1.3 Sub-theme: Metaphors</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td><strong>Interpretive Lens Theme 2: Researcher as Instrument</strong></td>
<td><strong>27</strong></td>
<td></td>
</tr>
<tr>
<td>2.1 Sub-theme: Data that Resonated with Me</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>2.2 Sub-theme: Participant Insights Emerged During the Interview</td>
<td>9</td>
<td>7</td>
</tr>
</tbody>
</table>
The following section describes the definitions of the sub-themes that emerged relative to each interpretive lens. Each sub-theme also includes quotes to support the definition. This section ends with a summary of the divergent analysis.

**Theme 1: Language.** Language refers to data in which participants chose to communicate in a particular way to articulate and/or add meaning to their message. Three sub-themes emerged as a result of viewing the data through this lens: *advice*, *expressed emotion*, and *metaphors*.

**Theme 2: Language, sub-theme 1: advice.** Participants used language in the form of advice for other physician leaders as a way to describe their recommendations for dealing with work-related stress. I chose to create this sub-theme based on a clear pattern that emerged from the data. Specifically, I noticed that participants frequently spoke of insights and learnings they perceive to be important to pass on to other physician leaders. As they spoke of these recommendations, they described skills and abilities that have enabled them to maintain their leadership effectiveness while dealing with stress. The quantity of references to advice is significant. A total of 26 participants (74% of all participants) offered advice to fellow physician leaders. The below quotes are representative examples of this sub-theme.

I would say that if you're going to go into this role, it would be very valuable to have a coach, and I think that that probably is a must for those decisions when you're moving or transitioning into leadership roles. (Participant #908, Personal Communication, February, 2016)

…don't take any problems by yourself. If you ever find yourself the only one dealing with this problem, a red light should go off. (Participant #914, Personal Communication, November, 2015)
Theme 1: Language, sub-theme 2: expressed emotion. In addition to capturing verbatim participant responses via interview transcriptions, I made note of instances where participants outwardly expressed their emotions during an interview. Because I knew that the interview transcripts would only capture verbatim statements, I also noted my observations of their tone of voice during the interview. This process helped me capture the deeper meaning behind what participants were trying to express to me. For example, I observed one participant to sound sad and regretful as he said "I felt an incompleteness about having not met her" (Participant #925, Personal Communication, November, 2015). And another sounded exhausted when he said "I just feel this desire that if I could sleep for seven years and wake up and it's all done, I would be a much happier CMO" (Participant #915, Personal Communication, January, 2016).

Theme 1: Language, sub-theme 2: metaphors. Participants often used metaphors to add emphasis or provide clarity to a particular point of view. As I coded the data, I looked for words or phrases that had figurative meaning and therefore transcended their literal interpretation.

If I used to complain, my granddad used to say, "At least they aren't shooting at you" because he lived through World War II. I'm like, "You're right. They aren't shooting at me." And again, it's like these are big problems but in the grand scope of things, there will be a time when this is a memory and we'll get through it. (Participant #907, Personal Communication, February, 2016)

There's a game of chess being played out every day, and if you're going to be a successful leader, you need to look at the whole board and not get sucked into, well, if she moves the pawn there, I've got to counteract with my knight. (Participant #908, Personal Communication, February, 2016)

Theme 2: Researcher as instrument. Researcher as instrument refers to unique researcher characteristics believed to have the potential to influence the collection and
analysis of empirical data (Pezalla et al., 2012). I chose to use this lens to enhance my self-reflexivity by examining myself as the primary instrument of this research. For example, I too experience the tension of balancing work and life demands, and I noticed my reactions to participants’ descriptions of stress as having the potential to influence my analysis. To better understand my reactions, I kept detailed researcher memos throughout the data collection process to capture my observations and reflections about various aspects of the study. In doing so, I was analyzing data while I was collecting it, which had a beneficial impact on my ability to understand the data (Maxwell, 2013) as well as to recognize potential influences of my reactions on the analysis. Upon completion of the interviews, I chose to use the lens researcher as instrument to better understand the ways in which I have the potential to influence the data collection and/or analysis processes. Two sub-themes emerged as a result of viewing the data through this lens: 1) data that resonated with me, and 2) participant insights emerged during the interview.

Theme 2: Researcher as instrument, sub-theme 1: data that resonated with me.
While reading my research memos and reflecting on the interviews, I became aware of the fact that certain descriptions of participants’ experiences with stress and how they deal with stress resonated with me on a personal level. Thus, this sub-theme emerged as a result of my own reflections and increased awareness of potential subjectivities and/or biases I may have with regard to analyzing the data.

…an important aspect of how to deal with all this stuff, is that we need to practice being grateful. (Participant #904, Personal Communication, February, 2016)

I do believe that we have placed so much emphasis on work and not enough on life that we get all caught up into what we do and forget where we are and what's really important. (Participant #928, Personal Communication, January, 2016)
Theme 2: Researcher as instrument, sub-theme 2: participant insights emerged during the interview. During the interviews, it was apparent that the semi-structured nature of the interviews influenced the conversational tone between me and the participants. As a result, several participants experienced the emergence of insights during our conversation. In a sense, the interviews appeared to influence aspects of what participants chose to share with me.

… the RCA [root cause analysis] process is the equivalent of a debrief, of getting it off our chest and looking at what the problems are and looking for solutions. And it is a therapeutic process. I've never thought about that before, but it's helpful. (Participant #930, Personal Communication, December, 2015)

So, I thank you for the opportunity in wanting to talk about this, because it has helped me to refocus on my own personal priorities, and how I do cope with this stuff? And it's really clear to me, through this conversation, that it's time for me to reach out to somebody for some help. (Participant #904, Personal Communication, February, 2016)

**Divergent thematic analysis summary.** The divergent analysis allowed me to complete an initial in-depth reading of the interview transcripts. During this process, I chose to code the data based on two concepts: *language* and *researcher as instrument*. These concepts represented my ideas of what may be useful interpretive lenses with which to analyze the data.

**Convergent thematic analysis.** The divergent thematic analysis described in the previous section preceded the convergent thematic analysis and allowed me to create a more robust code set for the convergent analysis. As described in chapter 3, convergent analysis is akin to what Corbin and Strauss (2008) refer to as open-coding. They describe the process of coding as “opening up” the data to uncover the ideas it holds. The purpose
of this approach was to use codes to divide the data into meaningful patterns, resulting in themes and sub-themes with which to interpret the data.

I completed the convergent thematic analysis in three separate cycles. Given the relevance of my research methodology to the presentation of the study’s results, I provide a brief summary of the process below for the reader’s convenience.

**Step One:** In the first cycle of coding, I identified 50 descriptive codes based on patterns emerging from my initial reading of the transcripts.

**Step Two:** In the second cycle of coding, I re-read the transcripts and grouped the descriptive codes into eight pattern codes, or themes, to simplify my analysis of the data.

**Step Three:** After the two cycles of coding were complete, I developed the final grouping of three major categories, eight themes, and 26 sub-themes.

As described above, I grouped the data into three major categories. Within these three categories, there are a total of eight major themes. Within the eight major themes, the data is grouped into 26 sub-themes. Table 3 presents the category, theme, and sub-theme groupings. Next to each category and theme I indicate the total number of references (codes) I found as a result of my data coding process. For example, the category of *antecedents to stress* was noted a total of 343 times across all transcripts. Similarly, the theme of *sources of stress* was found a total of 260 times across all transcripts. Next to each sub-theme, I present the total number of times I coded data to this sub-theme (i.e., total number of references) as well as the total number and percentage of participants who spoke of the sub-theme. For example, 34 participants
(97% of all participants) spoke of the sub-theme organizational factors as a source of stress, and this sub-theme includes 151 total incidents.

Table 3. Results of Convergent Thematic Analysis

<table>
<thead>
<tr>
<th>Titles</th>
<th># References</th>
<th>Participants</th>
<th>N = 35</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category 1: Antecedents to Stress</strong></td>
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<td>8.3 Sub-theme: Personal Relationships</td>
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As represented in Table 3, the data is grouped into three major categories: 1) *antecedents to stress*, 2) *factors that impact one’s ability to manage stress*, and 3) *impacts of stress*. In the following paragraphs, I provide a more detailed description of the category, theme, and sub-theme groupings. I present the results progressively by summarizing the results relative to one particular category before moving to the next. Thus, I start with *antecedents to stress*, describing in depth the themes and sub-themes that define this category before doing the same for *factors that influence one’s ability to manage stress* and *impact of stress*. Within each category, I provide the definition of each theme and sub-theme, the total number of incidents of each, and the total number and percentage of participants who spoke of each. I use participants’ quotes extensively to substantiate the results. I chose these comments based on what I believed to be a representative example most closely capturing the meaning of each sub-theme.

**Category 1: antecedents to stress.** The category of *antecedents to stress* emerged as a result of participants’ descriptions of factors leading up to the actual feeling of stress. During the interview, participants were asked to describe the factors that contribute to their stress at work. I noticed that as they provided rich descriptions of the factors that trigger stress, they also frequently spoke of factors that influence their initial perception, or appraisal, of the situation as either stressful or not stressful. Participants described the triggers, as well as their descriptions of the factors that influence their appraisal process, as preceding the actual feelings of stress. As a result, I created the category of *antecedents to stress* to better understand the factors that prompt or moderate the feelings of stress.
Table 4 presents the results of the data coding process with respect to the category of *antecedents to stress*. It shows the association between the category and the two major themes within it: 1) *sources of stress*, and 2) *factors that influence the stress appraisal process*. For each of the themes, I defined a number of sub-themes as a way to further condense the data into clear groupings. The total number of references is noted in the # references column next to each theme and category. The total number and percentage of participants who spoke of each sub-theme are noted in the two columns to the right. For example, there are a total of 151 references of the sub-theme *organizational factors*, and thirty-four participants (97% of all participants) spoke of this sub-theme.

### Table 4. Results of Category 1: Antecedents to Stress

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<td>Theme 1: Sources of Stress</td>
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<td>1.4 Sub-theme: External Environmental Factors</td>
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<td>Theme 2: Factors that Influence the Stress Appraisal Process</td>
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<tr>
<td>2.2 Sub-theme: Previous Experience with Acute Stress</td>
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<tr>
<td>2.3 Sub-theme: Broad Sense of Identity</td>
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</table>

In the following sections, I provide a definition of each theme as well as definitions for each sub-theme nested under each theme. Quotations are provided for each sub-theme to demonstrate the strength of the sub-theme, theme, and category.

*Category 1: antecedents to stress, theme 1: sources of stress.* Within the theme *sources of stress*, I coded data that represented participants’ descriptions of factors that contribute to their stress at work. This theme emerged as a result of participants providing
rich descriptions about the factors that trigger stress in their CMO role. It should be noted that while many of the CMOs still carry some clinical responsibilities, their accounts of workplace stressors were primarily related to sources of stress associated with their administrative role. I grouped these factors, or sources of stress, into four sub-themes: 1) organizational factors, 2) individual factors, 3) transitional factors, and 4) external environmental factors.

Under the sub-theme organizational factors, I grouped references in which participants described stress resulting from organizational dynamics, including factors related to their role and responsibilities as a CMO. One of the most common organizational factors described by participants is the responsibility and the frequency with which they have to deal with clinical staff behavior issues. One participant stated “70% or 80% of my so called stressful time is dealing with physicians with disorderly behavior” (Participant #903, Personal Communication, February, 2016). Another major organizational factor contributing to participants’ stress is the tension they experience as a result of serving multiple constituencies. Participants also described an imbalance between the demands of the job and the resources available to them to perform effectively. Similarly, they spoke of how the enormous responsibility of the role produces high levels of stress and anxiety.

These roles are challenging because you are responsible across many constituencies, and you're managing constituencies, and each one needs a different approach. It could be patients, nurses, doctors, peer group executives. And that's what makes the job stressful and hard, all these different constituencies, each wanting or expecting something different. (Participant #908, Personal Communication, February, 2016)

So the thing that keeps me up at night is whether or not the care that I deliver, whatever setting that I'm overseeing as a manager or as a leader, CMO, is whether
or not the patients are gonna do well and have good outcomes. That we give the safest care that we can potentially give. (Participant #911, Personal Communication, January, 2016)

Finally, participants discussed experiencing stress that is projected onto them as a result of physician burnout, including physicians leaving the profession prematurely, physicians taking their aggressions out on others, and even physicians committing suicide.

One of our [doctors] was expressing suicidal comments. So a few issues, obviously we have a patient safety issue. The guy was at work doing cases. So we have a safety issue, we have a surgeon issue, surgeons need to work. We have cases scheduled and then I need to care for the [doctor]. (Participant #909, Personal Communication, February, 2016)

Under the sub-theme individual factors, I grouped references in which participants described factors that are personal or unique to them as an individual that may cause them to experience stress. For example, participants described how some of their stress stems from not being able to consistently meet the very high expectations they have of themselves. In a similar vein, participants also spoke of stress being triggered by feelings of concern for letting other people down. Participants also discussed examples of stress being triggered by a lack of self-efficacy.

My stress level's very high because you are not meeting someone's expectations nearly all the time. (Participant #933, Personal Communication, December, 2015)

A lot of days I still question, "Do I really belong in this role?". (Participant #917, Personal Communication, November, 2015)

Under the sub-theme transitional factors, I grouped references in which participants described challenges they’ve faced as a result of transitioning from a clinical role to an executive-level leadership role. They spoke of ways in which they were socialized in medical school and throughout their clinical practice and the stress induced
as a result of moving into a different social environment as a leader and administrator. They spoke of transitioning from the physician world to the administrative world as being perceived by other physicians as “going over to the dark side of administration” (Participant #931, Personal Communication, November, 2015). They described the difference of receiving constant feedback in their clinical roles—“it’s like heroin” (Participant #908, Personal Communication, February, 2016)—as compared to receiving very little immediate feedback in their administrative roles. They also described their experiences with stress as a result of learning how to work in an environment where they have far less control than they did as a clinician.

I think a lot of it is it's something that a place where you're in control. When you're doing patient care, you're the one who's driving the schedule. You're the one who's making decisions to help people. You're the one who's got the support when you need it. That's an easy structure. That's a comfortable, comforting structure to be in. (Participant #902, Personal Communication, January, 2016)

Under the sub-theme external environmental factors, I grouped references in which participants described healthcare environmental factors that put pressure on their organization and induce stress for them personally. Changing payer systems, increased competition, competition for medical staff, and the industry’s move from volume to value were noted as some of the most significant environmental factors that create stress for participants.

I think the thing that stresses me the most is the fact that as a Chief Medical Officer in an institution like this, with 1,000 physicians, I see the underbelly of healthcare on a daily basis. (Participant #928, Personal Communication, January, 2016)

*Category 1: antecedents to stress, theme 2: factors that influence the stress appraisal process.* Within the theme factors that influence the stress appraisal process, I
coded data that represented participants’ descriptions of factors that have shaped their appraisal of experiences or situations as either stressful or not stressful. This theme emerged as a result of patterns I noticed in the data that related to how participants view potential stressors and the cognitive process associated with their appraisal of the experience or situation. I grouped these factors into three sub-themes: 1) self-efficacy, 2) previous experience with acute stress, and 3) broad sense of identity.

Under the sub-theme of self-efficacy, I coded data that represented participants’ descriptions of self-efficacy as a resource factor in the stress appraisal process. Participants spoke of becoming more confident over time in their ability to deal with stress, and they related that confidence to the way in which they appraise a stressful encounter. They shared examples of situations that historically caused them to feel more stress than they now experience. In doing so, they describe a cognitive process of viewing and assessing the situation differently today than they would have earlier in their careers. They further attributed this change in view as stemming from a greater level of confidence in their ability to deal with stress.

The more you get put in difficult situations the more familiar it becomes, and I just worry less about it now because I’ve been successful in the past. (Participant #913, Personal Communication, January, 2016)

Under the sub-theme previous experience with acute stress, I coded data that referenced participants’ descriptions of previous experiences they have had with acute stress. Participants related these experiences to their current appraisals of stressful events, describing themselves as becoming partially desensitized over time to stressors. In terms of dealing with stress, participants described how coming from a clinical environment in which they had to make life or death decisions in a matter of seconds prepared them for
their current role. Similarly, they described how dealing with financial pressures and other demands of their role pales in comparison to the stress of having to tell someone they are dying.

I can tell you that there's nothing more stressful than sitting in ICU trying to keep someone alive either before or after a transplant, in the moment. (Participant #927, Personal Communication, December, 2015)

…how I look at things, "Well, if you're not telling someone that they're dying, then I can manage." And that sustained me at least for the past two years. (Participant #901, Personal Communication, January, 2016)

Under the sub-theme broad sense of identity, I coded data that referenced participants’ definitions of their self-identity. Participants spoke of having a broad sense of identity that goes beyond their CMO title or role, and they described how this helps them keep things in perspective.

That's the other thing that I think is important and it's helped me manage stress in this role. I do not allow myself to become defined by my work. I belong to a number of communities, and this is one of them, but it's not the only one. (Participant #934, Personal Communication, January, 2016)

Two major themes emerged under the category of antecedents to stress: 1) sources of stress, and 2) factors that influence the stress appraisal process. I presented the results of four major sources of stress—organizational factors, individual factors, transitional factors, and external environmental factors—as well as the results of three major factors that influence the stress appraisal process—self-efficacy, previous experience with acute stress, and broad sense of identity. In the following section, I discuss the definition of category 2 and the themes and sub-themes that are grouped into this category.

**Category 2: Factors that influence one’s ability to manage stress.** The category of factors that influence one’s ability to manage stress emerged as a result of interview
questions and discussion pertaining to how participants maintain their leadership effectiveness in light of experiencing a high degree of stress at work. When asked to describe how they deal with the pressures and demands of their role, participants described several factors that resulted in clear themes within this category. Consequently, I grouped these factors into five major themes within the factors that influence one’s ability to manage stress category: 1) self-management factors, 2) learning mindset factors, 3) empathy factors, 4) self-insight factors, and 5) situational and social awareness factors.

Table 5 presents the results of the data coding process with respect to the category of factors that influence one’s ability to manage stress. It shows the association between the category and the five major themes within it. For each of the themes, I defined a number of sub-themes as a way to further condense the data into clear groupings. The total number of references is noted in the # references column next to the category and each theme. The total number and percentage of participants who spoke of each sub-theme are noted in the two columns to the right. For example, there are a total of 78 references of the sub-theme stays connected to others, and 32 participants (91% of all participants) spoke of this sub-theme. In the sections following the table, I provide a definition of each theme as well as definitions for each sub-theme nested under each theme. Quotations are provided for each sub-theme to demonstrate the strength of the sub-theme, theme, and category.
Table 5. Results of Category 2: Factors that Influence One’s Ability to Manage Stress

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<td>7.3 Sub-theme: Values Collaboration and Teamwork</td>
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Category 2: factors that influence one’s ability to manage stress, theme 3: self-management factors. This theme emerged as a result of participants’ descriptions pertaining to self-management behaviors that help them deal with stress. Within this theme, I coded data that represented their references to emotional, verbal, and physical
self-control behaviors that contribute to their ability to manage their stress. As a result, I grouped the self-management factors into five sub-themes: 1) stays connected to others, 2) manages emotions and behaviors, 3) surfaces and manages conflict, 4) views challenges as problems to be solved, 5) and sets and works to maintain boundaries.

Under the sub-theme stays connected to others, I grouped references in which participants described the importance of having meaningful connections with others as a way to maintain emotional balance and deal with stress. Participants talked about “bouncing their problems off of others” (Participant #911, Personal Communication, January, 2016) as a way to seek advice from others and broaden their perspective of the situation. They most frequently spoke of family, support systems at work, and executive coaches as being trusted advisors to which they stay connected.

I think you avoid burnout by engaging with others, it's also saying how do I do something with somebody else that's positive? (Participant #913, Personal Communication, January, 2016)

Under the sub-theme manages emotions and behaviors, I grouped references in which participants described ways in which their ability to manage their emotions and behaviors during stressful events helped to de-escalate the tension in a situation. They discussed their ability to remain calm during a crisis as well as their ability to refrain from being reactive or making impulsive decisions. They also described how choosing to not take things personally enables them to effectively control their emotions during a stressful experience. They spoke of being in a highly conscious state while employing these self-management techniques. In a similar vein, they also described themselves as being highly cognitive of what they are about to say or do.
When I feel myself pent up a little bit, what I'll do, I will say to somebody, "I want to be impeccable here." And that is my catch phrase that makes me stop and become very cognitive of what I'm about to say and how I'm about to act. (Participant #928, Personal Communication, January, 2016)

I think it's very important to keep your head, not let people see you sweat, so to speak, lead by example, not make impulsive decisions… (Participant #921, Personal Communication, December, 2015)

Under the sub-theme *surfaces and manages conflict*, I grouped references in which participants described how their ability to productively surface and manage conflict enables them to deal with stressful experiences. They spoke of taking a proactive approach to resolving conflict rather than avoiding it. They also described their ability to move on and not hold things against other people after having a difficult conversation with them. Doing so, they say, makes a considerable difference in their ability to deal with stress.

And I never let things fester. When somebody does something, it isn't five minutes elapsed time until they will hear from me. So I don't go home and try to sleep on things very much. I'd rather not let things fester at all. I'm good at not postponing things. (Participant #925, Personal Communication, November, 2015)

I realize that in having conflict, it actually generates good dialogue, and often times you can come to a good resolution, whether or not you agree to something or you agree to disagree. So the first thing is I'd embrace conflict… (Participant #905, Personal Communication, February, 2016)

Under the sub-theme *views challenges as problems to be solved*, I grouped references in which participants described how recognizing patterns in a problem contributes to their ability to deal with stress. They describe it as a cognitive process in which they take the emotion out of a situation and focus on the challenge as a problem to be solved. They spoke of recognizing “what is a five alarm fire and what is a two alarm fire” (Participant #934, Personal Communication, January, 2016) and using that assessment to develop a plan of action for solving the problem.
I think I dealt with the stress by basically solving the problem and trying not to allow it to become emotional, and channeling whatever anxiety I had into problem-solving. (Participant #9109, 2015)

Your perceptions and feelings and emotions sometimes when you encounter one of these stressors is 90% of the problem until you can figure out what the real problem is and have some objectivity to it. So once I define the problem, then the next thing that I like to do in order to relieve my stress is, I try to figure out a way ahead. Because once I have a plan and a direction and a goal, then I go from the fretting stage into the "I'm just gonna get it done, knock this out, move on." As long as I have a deliberate way ahead, that seems to help my stress quite a bit. (Participant #911, Personal Communication, January, 2016)

Under the sub-theme sets and works to maintain boundaries, I grouped references in which participants described how setting and maintaining boundaries contributes to their ability to deal with stress. They spoke of knowing “when to walk away for the day” (Participant #924, Personal Communication, December, 2015), and they shared examples of how they set and manage priorities so that they can avoid getting to the point where it may create stress.

I don't take a lot of work home with me. When I leave, I'm done. I think it's important for leaders to have those boundaries. (Participant #914, Personal Communication, November, 2015)

**Category 2: factors that influence one’s ability to manage stress, theme 4: learning mindset factors.** Within this theme, I coded data that represented participants’ descriptions of how their perspective on learning and continual development contributes to their ability to manage stress. Coded data represented their references to an ability to learn from previous lessons and adapt to new situations and challenges. This learning mindset, they say, contributes to increasing their self-efficacy as they see themselves able to learn their way through challenging situations. Within this theme, I grouped the data
into three sub-themes: 1) adapts and applies lessons learned over time, 2) takes responsibility for own actions, and 3) is introspective.

Under the sub-theme *adapts and applies lessons learned*, I grouped references in which participants described how their ability to learn from previous experiences enables them to deal with the stress of equally challenging situations. They described learning experiences as having a positive impact on their self-efficacy and ability to cope with other stressors. They also spoke of becoming more comfortable in their own skin as they learn how to adapt to different situations and environments.

But now, I probably have two very difficult conversations a week like this with physicians. I think I’ve gotten better at not worrying about them. I just decide what I’m gonna do. (Participant #919, Personal Communication, January, 2016)

So you learn these coping techniques that get you through the challenge. (Participant #913, Personal Communication, January, 2016)

Under the sub-theme *takes responsibility for own actions*, I grouped references in which participants described how they were able to learn from their mistakes by taking responsibility for their actions. In doing so, they spoke of how making amends with others significantly relieved their stress.

I took responsibility for it. And I've always done that as leader. I ultimately have the responsibility. (Participant #935, Personal Communication, January, 2016)

Under the sub-theme *is introspective*, I grouped references in which participants described the value of self-evaluation as a mechanism for dealing with stress. They spoke of being introspective and thoughtful as a way to “build up emotional reserve that translates into having a very long fuse” (Participant #906, Personal Communication, February, 2016). By doing so, they say they are better able to understand how they are impacted by stressors and how they are better able to assess their ability to deal with
stress. Additionally, participants spoke of being introspective as a way to assess their performance in the moment while thinking of ways in which they intend to perform more effectively in the future.

But a lot of that [introspection] has helped, in terms of spending more time at self-evaluation and introspection. (Participant #930, Personal Communication, December, 2015)

Category 2: factors that influence one’s ability to manage stress, theme 5: empathy. Within this theme, I coded data that represented participants’ descriptions of being able to identify with others’ feelings, thoughts, and attitudes. Additionally, I coded data for which participants referenced a strong desire and willingness to act on their care and concern for others in order to meet their needs. Participants described how focusing less on themselves and more on serving others greatly contributes to their ability to deal with stress. Within the theme of empathy, I further grouped data into two sub-themes: 1) leads with compassion to serve others and 2) actively listens and seeks to understand others.

Under the sub-theme of leads with compassion to serve others, I grouped references in which participants described having a deep sense of care and concern for their patients, their medical staff, and their communities. They spoke of this sense of compassion as driving their motivations and actions to serve others. Specifically, they discussed how they are comfortable making a difficult and stressful decision when they center the decision on what is best for the patient. They further described how leading with a sense of compassion for others decreases the focus on them and brings their stress level down. One participant described it as, “getting back to the bedside, and connecting
to the ‘why we are doing this’ is my tranquilizer” (Participant #915, Personal Communication, January, 2016).

Because no one ever wants to hurt anyone in medicine, and I think that one of those concerns that I've always had is the second victim. So a nurse makes the human error or mistake, it's devastating to them personally. So one of my concerns is always to make sure that those folks who experience that are supported and have some backup. (Participant #935, Personal Communication, January, 2016)

My general motivation is care for our patients, care for our community, make our state a healthier place. Do it in a way that's financially responsible, with the good stewardship that just supports the mission and do that with honesty, transparency and integrity. And so as long as I can do that on a daily basis, then I can deal with at times being attacked for my opinion or view on a certain issue or what can be viewed as, oh you took the doc's side this time. (Participant #909, Personal Communication, February, 2016)

Under the sub-theme of actively listens and seeks to understand others, I grouped references in which participants described how actively listening and seeking to understand others’ perspectives enhances their leadership effectiveness and in turn minimizes stress that may stem from attempting to influence others. Participants described how physicians feel empowered and engaged when they see their CMO working alongside them on the floors, seeing patients, and struggling with the same EMR (electronic medical record) frustrations they do. They also describe how showing an active interest in other people’s perspectives greatly contributes to their ability to de-escalate tension and stress when having a difficult conversation. Participants also spoke of “putting themselves in others’ shoes” as an effective way to suspend their own judgment, allowing them to open up their curiosity to why the other individual may be behaving in a particular way. Doing so, they say, “makes you much, much less likely to go off on them or to get into a situation that’s stressful” (Participant #470, 2015).
What I try to do is when I'm in those stressful, high-risk conversations is I really work very hard at trying to make it a safe environment for whoever I'm with. Because if I make them feel safe, then I'm far more likely to be able to influence some change. (Participant #928, Personal Communication, January, 2016)

Category 2: factors that influence one’s ability to manage stress, theme 6: self-insight factors. This theme emerged as a result of participants’ descriptions pertaining to how having insights into themselves helps them manage stress. Within this theme, I coded data that represented participants’ references to having an awareness and understanding of their emotions, feelings, thoughts, skills, abilities, and self-needs. As a result, I grouped these factors into three sub-themes: 1) insight into skills and abilities, 2) insight into emotions, feelings, and thoughts, and 3) insight into self-needs.

Under the sub-theme insight into skills and abilities, I grouped references in which participants described how understanding limits to their skills and abilities enables them to deal with stress. They also spoke of how understanding their strengths and weaknesses helps them learn how to adapt to different types of situations. With a heightened sense of awareness of their limits, participants also discussed how they in turn use that information about themselves to seek help from others.

It’s asking for help when you need it. It’s recognizing yourself, “I need some help with this.” (Participant #904, Personal Communication, February, 2016)

Under the sub-theme insight into emotions, feelings, and thoughts, I grouped references in which participants described how having an increased awareness of their stress level enables them to be prepared, be proactive, and recognize when they are “cycling down and about to get stressed” (Participant #908, Personal Communication, February, 2016). Additionally, participants described a heightened sense of awareness related to how they think about what they can control versus what they cannot control. In
doing so, they say that “how you react to those situations is really up to you and no one else” (Participant #911, Personal Communication, January, 2016).

As a leader, I need to understand what stress level I am. So that awareness of understanding the stress, understanding where the stressful event is taking you, that is important. I think the most important skill is to have that awareness of your stress. (Participant #920, Personal Communication, January, 2016)

Under the sub-theme insight into self-needs, I grouped references in which participants described having a recognition of what they personally need to be well and function optimally. They provided examples such as exercising, time with family, and other hobbies as activities they need to help them manage stress. Some spoke of “being able to function better with a little baseline level of stress” (Participant #916, Personal Communication, January, 2016). They also described behavioral changes resulting from an increased level of awareness of their self-needs as having a positive impact on their ability to deal with stress.

…. being self-aware that I'm reaching that point [distress]. That awareness to me is critical….all the people, all the events, all the issues, all the just plain burnout. If I can feel it, that I just need it, I will just take a day off. I'm getting much better at recognizing that point where I feel that I just need to back up. (Participant #915, Personal Communication, January, 2016)

I'm a worthwhile human being that deserves help when I need it. It's time for me to reach out to my counselor. (Participant #904, Personal Communication, February, 2016)

Category 2: factors that influence one’s ability to manage stress, theme 7: situational and social awareness factors. Within this theme, I coded data that represented participants’ descriptions of how they use their situational and social awareness skills to get work done through others, which in turn decreases their stress level. These skills include the ability to garner credibility and trust from others, the ability to understand and
work within the formal organizational culture and less formal social networks, and the
ability to collaborate with others. As such, I grouped these factors into three sub-themes:
1) aware of organizational culture and social networks, 2) aware of credibility and trust
for and from others, and 3) values collaboration and teamwork.

Under the sub-theme of aware of organizational culture and social networks, I
grouped references in which participants described the importance of understanding and
working within the formal organizational culture as well as the social environment. They
spoke of being able to pick up on subtle cues from others as techniques they use to
understand social dynamics. They emphasized the significance of these executive level
skills, and when these skills are lacking they say it can lead to a high degree of stress.

…understand the environment and the culture that you're in, and learn what it
takes to be effective in that culture. That situational awareness or cultural
awareness…I don't think it can be underplayed. I think that's what helps you
understand how to be successful... (Participant #931, Personal Communication,
November, 2015)

Under the sub-theme aware of credibility and trust from and for others, I grouped
references in which participants discussed having and receiving credibility and trust of
others. They spoke of how understanding these social dynamics enables them to build
effective working relationships with both their medical staff and other leaders on the
executive team. They further described how they intentionally work to build their
credibility and garner trust of medical staff by maintaining some level of clinical practice
and understanding the pitfalls and frustrations of electronic health record (EHR) and
other systems. This approach, they say, enables them to garner necessary medical staff
support for organizational changes, which in turn reduces their stress level by
encountering less resistance.
So I understand where they're coming from. There is fear. There's a lack of belief that somebody is going to bring value to them and I needed to establish my credibility. And every time that they pushed back, if I pushed back then it was going was to be a struggle about who was right, not what was the right thing. (Participant #926, Personal Communication, December, 2015)

Under the sub-theme of values collaboration and teamwork, I grouped references in which participants described how they are able to mitigate the risk of a potential stressor by seeking to collaborate with others. They spoke of collaboration and teamwork as essential skills needed to address problems and drive change in their organization. Similar to the sub-theme of aware of organizational culture and social networks, they say that their stress is induced when collaboration and teamwork skills are lacking.

I believe that I might be the chief medical officer, but it's not me, it's the team. It's not me, it's we that makes the difference. And I really try to get involvement of the people that are there to support me. (Participant #928, Personal Communication, January, 2016)

Five major themes emerged under the category of factors that influence one’s ability to manage stress: 1) self-management factors, 2) learning mindset factors, 3) empathy factors, 4) self-insight factors, and 5) situational and social awareness factors. I presented the results of each theme as well as the results of each sub-theme within each theme. In the following section, I discuss the definition of category 3 and the themes and sub-themes that are grouped into this category.

**Category 3: impact of stress.** The category of impact of stress emerged as a result of participants’ descriptions of the short term and longer terms effects of stress on their emotional and physical wellbeing, leadership effectiveness, and personal relationships. They shared examples of how the stress itself is impacting them and others as well as examples of how their response to a stressful situation affects themselves and others.
Participants primarily attributed the impact on themselves and others as having to do with how they dealt with their emotions and behaviors during and after the stressful experience. They further expressed their concern for the negative impacts of stress on themselves and others.

Table 6 presents the results of the data coding process with respect to the category of *impact of stress*. This particular category has only one major theme: *impact of stress*. Within this theme, I defined three sub-themes as a way to further condense the data into clear groupings. The total number of references is noted in the # references column next to each theme and category. The total number and percentage of participants who spoke of each sub-theme are noted in the two columns to the right. For example, there are a total of 52 references of the sub-theme *emotional and physical wellbeing* and thirty-two participants (91% of all participants) spoke of this sub-theme.

Table 6. Results of Category 3: Impact of Stress

<table>
<thead>
<tr>
<th>Titles</th>
<th># References</th>
<th>Participants N = 35</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category 3: Impact of Stress</strong></td>
<td>122</td>
<td>35</td>
<td>100</td>
</tr>
<tr>
<td>Theme 8: Impact of Stress</td>
<td>122</td>
<td>35</td>
<td>100</td>
</tr>
<tr>
<td>8.1 Sub-theme: Emotional and Physical Wellbeing</td>
<td>52</td>
<td>32</td>
<td>91</td>
</tr>
<tr>
<td>8.2 Sub-theme: Leadership Effectiveness</td>
<td>64</td>
<td>27</td>
<td>77</td>
</tr>
<tr>
<td>8.3 Sub-theme: Personal Relationships</td>
<td>6</td>
<td>6</td>
<td>17</td>
</tr>
</tbody>
</table>

In the following sections, I provide a definition of the *impact of stress* theme as well as definitions for each sub-theme nested under this theme. Quotations are provided for each sub-theme to demonstrate the strength of the sub-theme, theme, and category.

*Category 3: impact of stress, theme 8: impact of stress.* Within the theme *impact of stress*, I coded data that represented participants’ descriptions of the short term and longer terms effects of stress on their emotional and physical wellbeing, leadership
effectiveness, and personal relationships. As a result, I grouped these factors, or impact of stress, into three sub-themes: 1) emotional and physical wellbeing, 2) leadership effectiveness, and 3) personal relationships.

Under the sub-theme emotional and physical wellbeing, I grouped references in which participants described both positive and negative impacts of stress on their wellbeing. This includes both short term and long term effects of stress on their emotional wellbeing and their physical wellbeing.

Regarding emotional wellbeing, participants described positive impacts when they described situations in which they felt they had successfully dealt with a stressful situation. They spoke of “feeling good” and “viewing it as a positive experience” (Participant #935, Personal Communication, January, 2016) after responding effectively to a stressor and described how it increased their self-efficacy to manage similar stressors in the future. In contrast, they described feelings of anxiety, regret, and angst when they discussed situations in which they felt that they did not successfully deal with a stressful situation.

I never feel good when someone else is uncomfortable or in pain. I don't sit around here trying to make other people feel small or feel less. I felt bad. (Participant #905, Personal Communication, February, 2016)

Under the sub-theme emotional and physical wellbeing, I also grouped references in which participants described the impacts of stress on their physical wellbeing. They discussed the physical side effects of stress itself and described how their ability to deal with the stress impacted their physical health. Participants described the impact as being primarily negative, noting sleep deprivation, weight gain, and increased blood pressure as the most common physical side effects of stress.
I was totally normotensive when I went in as CMO, and after three years in, my wife was really noticing that I was not managing the stress as I should. I had my blood pressure taken in the office one day…. I was actually beginning to have hypertension related to the stress. (Participant #903, Personal Communication, February, 2016)

Under the sub-theme *leadership effectiveness*, I grouped references in which participants described how work-related stress negatively and positively impacts their leadership effectiveness. Their descriptions were less directly related to the experience of stress itself and more directly related to how they perceived their response to stress as impacting their leadership effectiveness. Participants discussed examples in which they did not deal well with a stressful situation and the negative implications it had on their leadership effectiveness. Similarly, they discussed examples in which they effectively dealt with a stressful situation and the positive implications it had on their leadership effectiveness.

Regarding circumstances in which participants did not deal well with a stressful situation, they provided examples of not controlling their emotions and behaviors when feeling stress. They spoke of taking things personally, muting emotions, losing engagement, lashing out at others, and avoiding conflict as a few ways in which they did not deal well with stress. They further described how these actions adversely impacted their credibility and ability to influence and lead others.

It [my response to the situation] was not good. I don't feel like it did me any good. I never want to do that again. (Participant #912, Personal Communication, January, 2016)

Unfortunately, it [my response to the situation] did not go over well. For nearly six or eight months, it just shut them down. They wouldn't tell me anything. They were just angry. (Participant #905, Personal Communication, February, 2016)
Regarding circumstances in which participants did deal well with a stressful situation, they provided examples of making balanced and fair decisions, refraining from casting judgments, not taking things personally, and remaining calm when in conflict with someone. Participants also discussed ways in which their leadership effectiveness improved as a result of their positive response to a stressful situation. They further described how these actions positively impacted their credibility and ability to influence and lead others.

I know it [my response to the situation] raised my credibility with both the board, my CEO and the CFO. (Participant #931, Personal Communication, November, 2015)

I think it ended pretty well because I've changed a lot of things to give them more voice. I think they've seen that. I think my standing in their particular eyes is better today than it was six months ago, clearly better than it was a year ago. (Participant #917, Personal Communication, November, 2015)

Under the sub-theme personal relationships, I grouped references in which participants described the impact of stress on their personal relationships. They spoke of having a limited amount of time to spend with loved ones, resulting in their “family suffering” (Participant #904, Personal Communication, February, 2016). They also described a lack of quality family time due to the fact that they are “more short-tempered” when at home (Participant #922, Personal Communication, January, 2016). A couple of participants also attributed their divorce in part to the stress they were experiencing from work.

I mean, obviously, it’s a very stressful job. When you go home, you perseverate about your problems. You're at home but you're not necessarily in the present moment with your family. (Participant #911, Personal Communication, January, 2016)
Three major themes emerged under the category of impact of stress: 1) emotional and physical wellbeing, 2) leadership effectiveness, and 3) personal relationships. I presented the results of each theme as well as the results of each sub-theme within each theme.

Convergent thematic analysis summary. The convergent analysis built on the divergent analysis. My goal with respect to the convergent analysis was twofold. My first goal was to capture all the recurring patterns in the data and group them into meaningful categories. My second goal was to organize these categories in a way that was useful to reflect on their relationship to the study’s research questions, with the goal of extracting significant findings from the data.

First cycle descriptive codes allowed me to order the data according to a set of categories that I chose. I selected these categories based on the insights I gained from the divergent analysis as well as from my recognition of patterns in the data. In the second cycle of coding, I re-read the transcripts and grouped descriptive codes into eight pattern codes, or themes, to simplify my analysis.

After the three cycles of coding were complete, I organized the data in a manner useful for my reflection on the study’s findings. Specifically, I placed the coded data into a framework that includes three major categories, eight themes, and 26-sub-themes. The framework was developed inductively and represents my own thinking and not that of the interviewees. In this chapter, I used the framework as a way to describe the themes and sub-themes that emerged in the data analysis process so the results could later be compared to the results of a deductive thematic analysis using the ESCI model to code
the data. This was an important prelude to a deeper reflection about what the themes and their relationships suggest with respect to the research questions that guided this study.

In the next section, I present the results of the deductive thematic analysis process. The comparison between the inductive thematic analysis results and the deductive thematic analysis results are presented at the end of this chapter.

**Deductive Thematic Analysis Results**

As described in chapter 3, I chose to also categorize and code the qualitative data according to the Emotional and Social Competency Inventory (ESCI) model. This analysis was intended to discover what, if any, alignment occurs between EI competencies and reports of understanding and managing stress.

As a reminder, the ESCI model includes 12 competencies grouped under four general competency clusters: *self-awareness, self-management, social awareness, and relationship management*. The first two domains determine how well one understands and manages oneself and his or her emotions; the second two describe how well one recognizes and manages the emotions of others, builds relationships, and works in complex social systems (Boyatzis, 2008; Goleman et al., 2013; McKee et al., 2008; Boyatzis & McKee, 2005).

In the following pages, I present the results of the ESCI coding analysis in two sections. Because the ESCI competencies are typically oriented around a particular structure, I first present the results in the order of the ESCI model—self-awareness, self-management, social awareness, and relationship management. Following this presentation of results, I re-present the results of the 12 ESCI competencies and report the
information in descending order of the percentage of participants who provided examples of each competency.

**ESCI results by competency cluster.** Table 7 represents a summary of the total number of incidences (i.e., codes) of each ESCI competency cluster as well as the total number of incidences of each ESCI competency. The total number of participants and the percentage of participants are also included in the table. For example, the competency cluster of self-awareness was coded a total of 76 times and was reported by 31 participants (89% of all participants).

<table>
<thead>
<tr>
<th>Titles</th>
<th># Incidences</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 35</td>
<td>%</td>
</tr>
<tr>
<td><strong>Competency Cluster: Self-Awareness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional self-awareness</td>
<td>76</td>
<td>31</td>
</tr>
<tr>
<td><strong>Competency Cluster: Self-Management</strong></td>
<td>138</td>
<td>35</td>
</tr>
<tr>
<td>Emotional self-control</td>
<td>77</td>
<td>33</td>
</tr>
<tr>
<td>Achievement orientation</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>Adaptability</td>
<td>25</td>
<td>16</td>
</tr>
<tr>
<td>Positive outlook</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td><strong>Competency Cluster: Social Awareness</strong></td>
<td>73</td>
<td>28</td>
</tr>
<tr>
<td>Empathy</td>
<td>45</td>
<td>23</td>
</tr>
<tr>
<td>Organizational awareness</td>
<td>28</td>
<td>19</td>
</tr>
<tr>
<td><strong>Competency Cluster: Relationship Management</strong></td>
<td>198</td>
<td>34</td>
</tr>
<tr>
<td>Conflict management</td>
<td>78</td>
<td>31</td>
</tr>
<tr>
<td>Teamwork</td>
<td>57</td>
<td>30</td>
</tr>
<tr>
<td>Coach and mentor</td>
<td>40</td>
<td>22</td>
</tr>
<tr>
<td>Inspirational leadership</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td>Influence</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

**Results of ESCI competency clusters and competencies.** In this section, I provide a definition of each competency cluster, followed by a report of the results of each competency cluster. Within each competency cluster, I describe the competencies and associated behavioral indicators for each competency. Each competency-level subsection also includes a report of results relating to each identified behavioral indicator. I
then use participants’ quotes extensively as a way of substantiating the results. For each behavioral indicator, I cite a participant’s comment that I believe most accurately captures the meaning of that sub-theme. Additional quotations are captured in Appendix 2: Additional Quotations in Support of ESCI Codes.

**Self-awareness competency cluster.** According to the ESCI model, the self-awareness competency cluster is focused on one’s ability to recognize his or her emotions (i.e., emotional self-awareness) (McKee et al., 2008). Individuals high in emotional self-awareness are adept at reading their own emotions and recognizing their impact on others (Boyatzis & McKee, 2005). Individuals with high self-awareness typically know their limitations and strengths, exhibit gracefulness in learning where they need to improve, and welcome constructive criticism and feedback. According to the model, the self-awareness competency consists of 6 behavioral indicators: 1) *able to describe how own feelings affect own actions*, 2) *describes underlying reasons for own feelings*, 3) *aware of the connection between what is happening and own feelings*, 4) *shows awareness of own feelings*, 5) *does not describe own feelings*, and 6) *acknowledges own strengths and weaknesses*.

Table 8 represents a report of the total number of incidences (i.e., codes) of each behavioral indicator for the self-awareness competency. For example, the behavioral indicator of *able to describe how own feelings affect own actions* was coded a total of 3 times and was reported by 2 participants (6% of all participants). Below the table, I include representative examples of each self-awareness behavioral indicator as described by participant quotations.
Table 8. Total Number of Incidences of Behavioral Indicators for the Emotional Self-Awareness Competency

<table>
<thead>
<tr>
<th>Competency</th>
<th>Behavioral Indicator</th>
<th># Incidences</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Awareness</td>
<td>Able to describe how own feelings affect own actions</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Describes underlying reasons for own feelings</td>
<td>28</td>
<td>21</td>
</tr>
<tr>
<td>(76)</td>
<td>Aware of the connection between what is happening and own feelings</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Shows awareness of own feelings</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Does not describe own feelings</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Acknowledges own strengths and weaknesses</td>
<td>12</td>
<td>11</td>
</tr>
</tbody>
</table>

The following quotation is a representative example of the ESCI behavioral indicator “able to describe how own feelings affect own actions”.

The thing I think I normally do under a lot of stress. I tend to revert back with more on the introverted scale, so I have to be aware one, I'm under stress. (Participant #909, Personal Communication, February, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “describes underlying reasons for own feelings”.

But when it comes to the point where I need to make a decision because it's not really aligned with my values then that is really a stressful situation for me. (Participant #920, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “aware of the connection between what is happening and own feelings”.

…I realized that in a real sense, both physically and to some degree mentally and emotionally, I was just at the end of my rope. So part of going into more of an administrative role was the decision that at some point I had to set limits and say no. (Participant #930, Personal Communication, December, 2015)

The following quotation is a representative example of the ESCI behavioral indicator “shows awareness of own feelings”.

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I'm starting to sense a little bit of what I would call burnout as me as a surgeon. If I'm going to continue on, I need to maybe make a career selection change."
( Participant #928, Personal Communication, January, 2016)

There are no notable quotes to represent the ESCI behavioral indicator “does not describe own feelings”.

The following quotation is a representative example of the ESCI behavioral indicator “acknowledges own strengths and weaknesses”.

I like to think that I have self-awareness, but I also have enough self-awareness to know that I may not be fully self-aware all the time. (Participant #901, Personal Communication, January, 2016)

**Self-management competency cluster.** According to the ESCI model, the self-management competency cluster includes the following competencies: *emotional self-control, achievement orientation, adaptability, and positive outlook* (McKee et al., 2008).

Table 9 provides a summary of the total number of incidences of each competency under the self-management competency cluster.

<table>
<thead>
<tr>
<th>Titles</th>
<th># Incidences</th>
<th>Participants N = 35</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency Cluster: Self-Management</td>
<td>138</td>
<td>35</td>
<td>100</td>
</tr>
<tr>
<td>Emotional self-control</td>
<td>77</td>
<td>33</td>
<td>94</td>
</tr>
<tr>
<td>Achievement orientation</td>
<td>26</td>
<td>20</td>
<td>57</td>
</tr>
<tr>
<td>Adaptability</td>
<td>25</td>
<td>16</td>
<td>46</td>
</tr>
<tr>
<td>Positive outlook</td>
<td>10</td>
<td>8</td>
<td>23</td>
</tr>
</tbody>
</table>

In the following sections, I provide the definition for each self-management competency. Following each definition, I provide a summary of the total number of incidences of each behavioral indicator within the corresponding competency.

Additionally, representative examples of each behavioral indicator are supported by the inclusion of quotations from participant interviews.
Emotional self-control. The ESCI model defines emotional self-control as the ability to keep disruptive emotions and impulses under control (Boyatzis & McKee, 2005). According to the model, the adaptability competency consists of 6 behavioral indicators: 1) gets impatient or shows frustration inappropriately, 2) acts appropriately even in emotionally charged situations, 3) remains calm in stressful situations, 4) remains composed, even in trying moments, 5) controls impulses appropriately in situations, and 6) loses composure under stress. Table 10 below provides a summary of the total number of incidences of each behavioral indicator included in the emotional self-control competency.

Table 10. Total Number of Incidences of Behavioral Indicators for the Emotional Self-Control Competency

<table>
<thead>
<tr>
<th>Competency</th>
<th>Behavioral Indicator</th>
<th># Incidences</th>
<th>Participants N = 35</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Self-Control</td>
<td>Gets impatient or shows frustration inappropriately</td>
<td>22</td>
<td>21</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>Acts appropriately even in emotionally charged situations</td>
<td>8</td>
<td>5</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>Remains calm in stressful situations</td>
<td>10</td>
<td>9</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Remains composed, even in trying moments</td>
<td>21</td>
<td>16</td>
<td>46%</td>
</tr>
<tr>
<td></td>
<td>Controls impulses appropriately in situations</td>
<td>9</td>
<td>6</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>Loses composure when under stress</td>
<td>7</td>
<td>6</td>
<td>17%</td>
</tr>
</tbody>
</table>

The following quotation is a representative example of the ESCI behavioral indicator “gets impatient or shows frustration inappropriately”.

I listened to her going on for a minute, finally I just said, "That is the stupidest thing that I've ever heard". (Participant #913, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “acts appropriately even in emotionally charged situations”.

110
I'm going to calm down and then next week, wait a couple of days, and when I'm no longer angry, when I can respond to this email without any emotion whatsoever, then I'll send her an email and say, 'I'm sorry we don't agree. My opinion is very different, here's why,’ and just leave it at that." (Participant #913, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “remains calm in stressful situations”.

He said, "I see people in meetings work so hard to get under your skin, and are tweaking you and pushing you, and you just remain calm…and I am amazed by the way you hold your cool under periods of stress". (Participant #910, 2015)

The following quotation is a representative example of the ESCI behavioral indicator “remains composed, even in trying moments”.

So, I certainly had surgeons come storming into my office who are of the opinion that I am a lowborn, stupid and not worthy of continued life. And it's like, "Okay, so tell me what's got you angry?" I respond to the situation, not to the attack. (Participant #926, Personal Communication, December, 2015)

The following quotation is a representative example of the ESCI behavioral indicator “controls impulses appropriately in situations”.

In the room, I was telling myself to shut up, which is something I tell myself a lot. My inner voice is frequently at meetings saying, Shut up, shut up. Don't talk, keep your mouth shut. (Participant #910, 2015)

The following quotation is a representative example of the ESCI behavioral indicator “loses composure when under stress”.

And he pushed all my buttons. And I basically retreated to my, "I'm the chief," persona, and said, "This is how it's going to be." And it all went south. (Participant #930, Personal Communication, December, 2015)

Achievement orientation. The ESCI model defines achievement orientation as having the drive to improve one’s performance to meet self-defined standards of excellence (Boyatzis & McKee, 2005). According to the model, the achievement
orientation competency consists of 6 behavioral indicators: 1) *initiates actions to improve own performance*, 2) *seeks to improve own self by setting measureable and challenging goals*, 3) *does not strive to improve own performance*, 4) *strives to improve own performance*, 5) *does not try to improve*, and 6) *seeks ways to do things better*. Table 11 provides a summary of the total number of incidences of each behavioral indicator included in the achievement orientation competency.

**Table 11. Total Number of Incidences of Behavioral Indicators for the Achievement Orientation Competency**

<table>
<thead>
<tr>
<th>Competency</th>
<th>Behavioral Indicator</th>
<th># Incidences</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement Orientation</td>
<td>Initiates actions to improve own performance</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>(26)</td>
<td>Seeks to improve own self by setting measurable and challenging goals</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Does not strive to improve own performance</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Strives to improve own performance</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Does not try to improve</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Seeks ways to do things better</td>
<td>13</td>
<td>10</td>
</tr>
</tbody>
</table>

The following quotation is a representative example of the ESCI behavioral indicator “initiates actions to improve own performance”.

I realized I don't know anything about being a leader. I need to get an education, so I went out and saw that there was this whole body of work in leadership I wasn't even aware of at that point. (Participant #914, Personal Communication, November, 2015)

The following quotation is a representative example of the ESCI behavioral indicator “seeks to improve own self by setting measurable and challenging goals”.

And then I became department chair here in 2003, and that had always been a career ambition... (Participant #9109, 2015)

There are no notable quotes to represent the ESCI behavioral indicator “does not strive to improve own performance”.

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The following quotation is a representative example of the ESCI behavioral indicator “strives to improve own performance”.

I think that helps people to trust my leadership more because they will all tell you I don't lead because of my title. I've earned this. I keep trying to earn it. I never take this title for granted. (Participant #923, Personal Communication, January, 2016)

There are no notable quotes to represent the ESCI behavioral indicator “does not try to improve”.

The following quotation is a representative example of the ESCI behavioral indicator “seeks ways to do things better”.

So what I'm trying to do is create a pathway that I can guide people to reduce my stress of having to deal with all the one-offs and the crisis that happens on a daily basis with a chair. (Participant #932, Personal Communication, January, 2016)

And secondly, I always do double loop learning from things like that. And that's going back and saying, "What else could I have done or should I have done?". (Participant #935, Personal Communication, January, 2016)

Adaptability. The ESCI model defines adaptability as the ability to demonstrate flexibility in adapting to changing situations or the ability to overcome obstacles (Boyatzis & McKee, 2005). According to the model, the adaptability competency consists of 6 behavioral indicators: 1) has difficulty adapting to uncertain and challenging conditions, 2) adapts by smoothly juggling multiple demands, 3) adapts by applying standard procedures flexibly, 4) adapts overall strategy, goals, or projects to fit the situation, 5) adapts to shifting priorities and rapid change, and 6) adapts overall strategy, goals, or projects to cope with unexpected events. Table 12 provides a summary of the total number of incidences of each behavioral indicator included in the adaptability competency.
There are no notable quotes to represent the ESCI behavioral indicator “has difficulty adapting to uncertain and challenging conditions”.

The following quotation is a representative example of the ESCI behavioral indicator “adapts by smoothly juggling multiple demands”.

Yeah, and in many regards, it's typical for what a CMO is, which is the number one thing in a job description is “other duties as assigned.” So much of what we do is fly by the seat of our pants to adjust and get through another day. (Participant #925, Personal Communication, November, 2015)

There are no notable quotes to represent the ESCI behavioral indicator “adapts by applying standard procedures flexibly”.

The following quotation is a representative example of the ESCI behavioral indicator “adapts overall strategy, goals, or projects to fit the situation”.

You basically get dropped in. I equate to being like a medical marine, and sometimes you just have to try to adjust. (Participant #921, Personal Communication, December, 2015)
The following quotation is a representative example of the ESCI behavioral indicator “adapts to shifting priorities and rapid change”.

I was patient in the past, I had times of impatience. And if nothing else, this taught me how to be patient in an ambiguous and unexpected climate where things change sometimes hour by hour, day by day, and I just had to exercise a lot of patience. (Participant #901, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “adapts overall strategy, goals, or projects to cope with unexpected events”.

And just when I think I've seen it all, then something else comes up. Then I say thank God that I've had this cache of experiences that has trained me for this, even though I don't know what the answer really is. I'm not going to waste any heartbeats flailing around. I'll just pull in the right people, and we'll just figure it out. (Participant #925, Personal Communication, November, 2015)

Positive outlook. The ESCI model defines positive outlook as one’s ability to expect that changes in the future will be for the better (Boyatzis & McKee, 2005). According to the model, the positive outlook competency consists of 6 behavioral indicators: 1) sees the positive in people, situations, and events more often than the negative, 2) believes the future will be better than the past, 3) views the future with hope, 4) sees possibilities more than problems, 5) sees opportunities more than threats, and 6) sees the positive side of a difficult situation. Table 13 provides a summary of the total number of incidences of each behavioral indicator included in the positive outlook competency.
Table 13. Total Number of Incidences of Behavioral Indicators for the Positive Outlook Competency

<table>
<thead>
<tr>
<th>Competency</th>
<th>Behavioral Indicator</th>
<th># Incidences</th>
<th>Participants N = 35</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Outlook</td>
<td>Sees the positive in people, situations, events more often than the negative</td>
<td>5</td>
<td>5</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>Believes the future will be better than the past</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Views the future with hope</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Sees possibilities more than problems</td>
<td>3</td>
<td>3</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Sees opportunities more than threats</td>
<td>3</td>
<td>3</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Sees the positive side of a difficult situation</td>
<td>2</td>
<td>2</td>
<td>6%</td>
</tr>
</tbody>
</table>

The following quotation is a representative example of the ESCI behavioral indicator “sees the positive in people, situations, and events more often than the negative”.

So I said, "Okay, I'm making a difference in the organization. I'm making a positive impact on some patients somewhere." (Participant #913, Personal Communication, January, 2016)

There are no notable quotes to represent the ESCI behavioral indicator “believes the future will be better than the past”, nor for the ESCI behavioral indicator “views the future with hope”.

The following quotation is a representative example of the ESCI behavioral indicator “sees possibilities more than problems”.

They're angry with the situation and maybe we could find a solution to help them through that situation. (Participant #905, Personal Communication, February, 2016)

There are no notable quotes to represent the ESCI behavioral indicator “sees opportunities more than threats”.

The following quotation is a representative example of the ESCI behavioral indicator “sees the positive side of a difficult situation”.

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And once I convince myself this is really what's best for the organization, not being afraid to push forward. (Participant #916, Personal Communication, January, 2016)

**Social awareness competency cluster.** According to the ESCI model, the social awareness competency cluster includes the following competencies: *empathy* and *organizational awareness* (McKee et al., 2008). Table 14 below provides a summary of the total number of incidences of each competency under the social awareness competency cluster.

<table>
<thead>
<tr>
<th>Titles</th>
<th># Incidences</th>
<th>Participants</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency Cluster: Social Awareness</td>
<td>73</td>
<td>28</td>
<td>80</td>
</tr>
<tr>
<td>Empathy</td>
<td>45</td>
<td>23</td>
<td>66</td>
</tr>
<tr>
<td>Organizational awareness</td>
<td>28</td>
<td>19</td>
<td>54</td>
</tr>
</tbody>
</table>

In the following sections, I provide the definition for each social awareness competency. Following each definition, I provide a summary of the total number of incidences of each behavioral indicator within the corresponding competency. Additionally, representative examples of each behavioral indicator are supported by the inclusion of quotations from participant interviews.

**Empathy.** The ESCI model defines empathy as the ability to sense others’ emotions, understand their perspectives, and take active interest in their concerns (Boyatzis & McKee, 2005). According to the model, the empathy competency consists of 5 behavioral indicators: 1) understands another person’s motivation, 2) understand others by listening attentively, 3) does not understand subtle feelings of others, 4) understands others by putting self into others’ shoes, and 5) understands others’ perspectives when
they are different from own perspective. Table 15 below provides a summary of the total number of incidences of each behavioral indicator included in the empathy competency.

Table 15. Total Number of Incidences of Behavioral Indicators for the Empathy Competency

<table>
<thead>
<tr>
<th>Competency</th>
<th>Behavioral Indicator</th>
<th># Incidences</th>
<th>Participants N = 35</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empathy (45)</td>
<td>Understands another person’s motivation</td>
<td>4</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Understands others by listening attentively</td>
<td>9</td>
<td>7</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Does not understand subtle feelings of others</td>
<td>3</td>
<td>3</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Understands others by putting self into others’ shoes</td>
<td>11</td>
<td>9</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Understands others’ perspectives when they are different from own perspective</td>
<td>18</td>
<td>14</td>
<td>40%</td>
</tr>
</tbody>
</table>

The following quotation is a representative example of the ESCI behavioral indicator “understands another person’s motivation”.

I knew he wants to... I know he wants to sue. So I knew he wouldn't physically harm me, which is the only thing that mattered, right? (Participant #912, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “understands others by listening attentively”.

But trying to get to the next level of understanding, asking more questions and listening are some of the techniques. You've actually got to show empathy to whatever the issue is and the person. I spend time listening. (Participant #927, Personal Communication, December, 2015)

The following quotation is a representative example of the ESCI behavioral indicator “does not understand subtle feelings of others”.

But I'm not certain that I heard what she was really saying about the stress she was under. (Participant #903, Personal Communication, February, 2016)
The following quotation is a representative example of the ESCI behavioral indicator “understands others by putting self into others’ shoes”.

… if I were that physician, I would do the same thing…That is my conflicting value. I put my hat on as a physician and I'm saying that I would do the same thing. (Participant #920, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “understands others’ perspectives when they are different from own perspective”.

So when they storm into the CEO's or the CMO's office and say, "You must do this, or babies will die," you've got to be able to bring them back to reality but also connect. You have to validate, you have to understand where they're coming from. (Participant #929, Personal Communication, January, 2016)

Organizational awareness. The ESCI model defines organizational awareness as an individual’s ability to detect crucial social networks and read key power relationships in an organization (Boyatzis & McKee, 2005). According to the model, the organizational awareness competency consists of 5 behavioral indicators: 1) understands social networks, 2) understands the values and culture of the team or organization, 3) understands the informal structure in the team or organization, 4) understands the informal processes by which work gets done in the team or organization, and 5) understands the team’s or organization’s unspoken rules. Table 16 provides a summary of the total number of incidences of each behavioral indicator included in the organizational awareness competency.
Table 16. Total Number of Incidences of Behavioral Indicators for the Organizational Awareness Competency

<table>
<thead>
<tr>
<th>Competency</th>
<th>Behavioral Indicator</th>
<th># Incidences</th>
<th>Participants N = 35</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Awareness (28)</td>
<td>Understands social networks</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Understands the values and culture of the team or organization</td>
<td>10</td>
<td>8</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>Understands the informal structure in the team or organization</td>
<td>8</td>
<td>7</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Understands the informal processes by which work gets done in the team or organization</td>
<td>9</td>
<td>8</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>Understands the team’s or organization’s unspoken rules</td>
<td>1</td>
<td>1</td>
<td>3%</td>
</tr>
</tbody>
</table>

There are no notable quotes to represent the ESCI behavioral indicator “understands social networks”.

The following quotation is a representative example of the ESCI behavioral indicator “understands the values and culture of the team or organization”.

I went through and I spelled out some of our cultural beliefs and I also pointed out that one of the cultural beliefs of our group is innovation and fast movement, and that that is just no longer a reality in our M&A corporate condition. (Participant #933, Personal Communication, December, 2015)

The following quotation is a representative example of the ESCI behavioral indicator “understands the informal structure in the team or organization”.

… you can't change that culture that quick when they've had a permissive person that allowed that for years prior to that. (Participant #917, Personal Communication, November, 2015)

The following quotation is a representative example of the ESCI behavioral indicator “understands the informal processes by which work gets done in the team or organization”.

And when the physicians want to do something, they get administrators in a room and they start talking about quality of care, and cutting edge, and all these various phrases. And when the administrators want to get their ways, they put a bunch of
physicians in a room, turn the lights down, and throw a bunch of numbers up on the screen. (Participant #901, Personal Communication, January, 2016)

There are no notable quotes to represent the ESCI behavioral indicator “understands the team’s or organization’s unspoken rules”.

**Relationship management competency cluster.** According to the ESCI model, the relationship management competency cluster includes the following competencies: *conflict management, teamwork, coach and mentor, inspirational leadership,* and *influence* (McKee et al., 2008). Table 17 provides a summary of the total number of incidences of each competency under the relationship management competency cluster.

<table>
<thead>
<tr>
<th>Titles</th>
<th># Incidences</th>
<th>Participants N = 35</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency Cluster: Relationship Management</td>
<td>198</td>
<td>34</td>
<td>97</td>
</tr>
<tr>
<td>Conflict management</td>
<td>78</td>
<td>31</td>
<td>89</td>
</tr>
<tr>
<td>Teamwork</td>
<td>57</td>
<td>30</td>
<td>86</td>
</tr>
<tr>
<td>Coach and mentor</td>
<td>40</td>
<td>22</td>
<td>63</td>
</tr>
<tr>
<td>Inspirational leadership</td>
<td>17</td>
<td>11</td>
<td>31</td>
</tr>
<tr>
<td>Influence</td>
<td>6</td>
<td>5</td>
<td>14</td>
</tr>
</tbody>
</table>

In the following sections, I provide the definition for each relationship management competency. Following each definition, I provide a summary of the total number of incidences of each behavioral indicator within the corresponding competency. Additionally, representative examples of each behavioral indicator are supported by the inclusion of quotations from participant interviews.

**Conflict management.** The ESCI model defines conflict management as the ability to understand different perspectives, resolve differences, and find common goals that everyone can endorse (Boyatzis & McKee, 2005). According to the model, the conflict
management competency consists of 5 behavioral indicators: 1) *tries to resolve conflict instead of allowing it to fester*, 2) *resolves conflict by de-escalating the emotions in a situation*, 3) *allows conflict to fester*, 4) *tries to resolve conflict by openly talking about disagreements with those involved*, and 5) *resolves conflict by bringing it into the open*.

Table 18 provides a summary of the total number of incidences of each behavioral indicator included in the conflict management competency.

**Table 18. Total Number of Incidences of Behavioral Indicators for the Conflict Management Competency**

<table>
<thead>
<tr>
<th>Competency</th>
<th>Behavioral Indicator</th>
<th># Incidences</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict Management (78)</td>
<td>Tries to resolve conflict instead of allowing it to fester</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Resolves conflict by de-escalating the emotions in a situation</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Allows conflict to fester</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Tries to resolve conflict by openly talking about disagreements with those involved</td>
<td>26</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Resolves conflict by bringing it into the open</td>
<td>12</td>
<td>8</td>
</tr>
</tbody>
</table>

The following quotations are representative examples of the ESCI behavioral indicator “tries to resolve conflict instead of allowing it to fester”.

And I never let things fester. When somebody does something, it isn't five minutes elapsed time until they will hear from me. (Participant #925, Personal Communication, November, 2015)

And in short, I relieve stress by acting rather than ruminating. Do the thing that needs doing. (Participant #934, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “resolves conflict by de-escalating the emotions in a situation”.

I think I dealt with the stress by basically solving the problem and trying not to allow it to become emotional, and channeling whatever anxiety I had into problem-solving. (Participant #910, Personal Communication, February, 2015)
The following quotation is a representative example of the ESCI behavioral indicator “allows conflict to fester”.

And so the comment just sat in the back of my head and festered until there was a quieter room. (Participant #933, Personal Communication, December, 2015)

The following quotation is a representative example of the ESCI behavioral indicator “tries to resolve conflict by openly talking about disagreements with those involved”.

…I pretty much led the meeting, and after an hour, by not taking on the problems but trying to find the issues and perspectives of the two parties, got them to find some common ground and develop a shared working model. (Participant #927, Personal Communication, December, 2015)

The following quotation is a representative example of the ESCI behavioral indicator “resolves conflict by bringing it into the open”.

I think for her and I, it was an opportunity to talk about those...like, where those frustrations were coming from. (Participant #912, Personal Communication, January, 2016)

Coach and mentor. The ESCI model defines the coach and mentor competency as one’s ability to provide timely and constructive feedback in an effort to cultivate others’ abilities (Boyatzis & McKee, 2005). According to the model, the coach and mentor competency consists of 6 behavioral indicators: 1) provides on-going mentoring or coaching, 2) provides feedback others find helpful for their development, 3) personally invests time and effort in developing others, 4) coaches and mentors others, 5) does not spend time developing others, and 6) cares about others and their development. Table 19 provides a summary of the total number of incidences of each behavioral indicator included in the coach and mentor competency.
Table 19. Total Number of Incidences of Behavioral Indicators for the Coach and Mentor Competency

<table>
<thead>
<tr>
<th>Competency</th>
<th>Behavioral Indicator</th>
<th># Incidences</th>
<th>Participants N = 35</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coach and Mentor (40)</td>
<td>Provides on-going mentoring or coaching</td>
<td>9</td>
<td>9</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Provides feedback others find helpful for their development</td>
<td>1</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Personally invests time and effort in developing others</td>
<td>11</td>
<td>9</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Coaches and mentors others</td>
<td>14</td>
<td>11</td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td>Does not spend time developing others</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Cares about others and their development</td>
<td>5</td>
<td>5</td>
<td>14%</td>
</tr>
</tbody>
</table>

The following quotation is a representative example of the ESCI behavioral indicator “provides on-going mentoring or coaching”.

I have a cohort of other clinicians that I personally mentor…and I have this whole group of other physician leaders that I’m actively mentoring. (Participant #904, Personal Communication, February, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “provides feedback others find helpful for their development”.

I generally advise young leaders and anyone who's young in the profession to see if they can...if they are lucky enough to find someone who's willing to mentor them that they look up to and trust. (Participant #921, Personal Communication, December, 2015)

The following quotation is a representative example of the ESCI behavioral indicator “personally invests time and effort in developing others”.

… I always found it rewarding to see the light bulb go off over somebody's head. Or I’ve always found that education is a great way to achieve behavioral changes in people. (Participant #901, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “coaches and mentors others”.

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So I have my days when I'm out at the new hospital mentoring, teaching, bringing it along, where I get out of the car in that parking lot, and my stress level drops. (Participant #929, Personal Communication, January, 2016)

There are no notable quotes to represent the ESCI behavioral indicator “does not spend time developing others”.

The following quotation is a representative example of the ESCI behavioral indicator “cares about others and their development”.

… if I feel like I'm helping other people get through something, I don't worry about my own issues quite as much. (Participant #919, Personal Communication, January, 2016)

_Influence._ The ESCI model defines the influence competency as one’s ability to use a wide range of tactics to persuade others (Boyatzis & McKee, 2005). According to the model, the influence competency consists of 6 behavioral indicators: 1) _convinces others by getting support from key people_, 2) _convinces others by using multiple approaches_, 3) _convinces others by appealing to their self-interest_, 4) _anticipates how others will respond when trying to convince them_, 5) _convinces others by developing behind the scenes support_, and 6) _convinces others through discussion_. Table 20 provides a summary of the total number of incidences of each behavioral indicator included in the influence competency.
Table 20. Total Number of Incidences of Behavioral Indicators for the Influence Competency

<table>
<thead>
<tr>
<th>Competency</th>
<th>Behavioral Indicator</th>
<th># Incidences</th>
<th>Participants N = 35</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influence (6)</td>
<td>Convinces others by getting support from key people</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Influence (6)</td>
<td>Convinces others by using multiple approaches</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Influence (6)</td>
<td>Convinces others by appealing to their self-interest</td>
<td>2</td>
<td>2</td>
<td>6%</td>
</tr>
<tr>
<td>Influence (6)</td>
<td>Anticipates how others will respond when trying to convince them</td>
<td>1</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>Influence (6)</td>
<td>Convinces others by developing behind the scenes support</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Influence (6)</td>
<td>Convinces others through discussion</td>
<td>3</td>
<td>3</td>
<td>9%</td>
</tr>
</tbody>
</table>

There are no notable quotes to represent the ESCI behavioral indicator “convinces others by getting support from key people”.

There are no notable quotes to represent the ESCI behavioral indicator “convinces others by using multiple approaches”.

The following quotation is a representative example of the ESCI behavioral indicator “convinces others by appealing to their self-interest”.

I basically said, "You know, this is not going to be a good fit for you. When I think about what's best for you at this next stage, this is not it and this is not working. And it just would be a matter of time, and it wouldn't even be very long before you were miserable." (Participant #9109, 2015)

There are no notable quotes to represent the ESCI behavioral indicator “anticipates how others will respond when trying to convince them”.

There are no notable quotes to represent the ESCI behavioral indicator “convinces others by developing behind the scenes support”.

The following quotations are representative examples of the ESCI behavioral indicator “convinces others through discussion”.

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But by the end of the discussion, you've got to make sure that this other person sees your perspective. (Participant #908, Personal Communication, February, 2016)

*Inspirational leadership.* The ESCI model defines the inspirational leadership competency as one’s ability to guide and motivate others with a compelling vision (Boyatzis & McKee, 2005). According to the model, the inspirational leadership competency consists of 5 behavioral indicators: 1) *leads by building pride in the group*, 2) *leads by inspiring others*, 3) *does not inspire followers*, 4) *leads by bringing out the best in people*, and 5) *leads by articulating a compelling vision*. Table 21 provides a summary of the total number of incidences of each behavioral indicator included in the inspirational leadership competency.

Table 21. *Total Number of Incidences of Behavioral Indicators for the Inspirational Leadership Competency*

<table>
<thead>
<tr>
<th>Competency</th>
<th>Behavioral Indicator</th>
<th># Incidences</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspirational Leadership (17)</td>
<td>Leads by building pride in the group</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Leads by inspiring others</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Does not inspire followers</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Leads by bringing out the best in people</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Leads by articulating a compelling vision</td>
<td>6</td>
<td>4</td>
</tr>
</tbody>
</table>

The following quotation is a representative example of the ESCI behavioral indicator “leads by building pride in the group”.

My team…we rallied around...we're going to make sure the institution's good. We're going to make sure our people are good. There was a common theme and so we all worked towards that end... (Participant #907, Personal Communication, February, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “leads by inspiring others”.
It's not me, it's we that makes the difference. And I really try to get involvement of the people that are there to support me, whether they're other medical staff leaders, or what would be perceived as subordinates in a normal hierarchical situation. (Participant #928, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “does not inspire followers”.

Well, I don't think that I built trust and I don't think that I generated an executive presence. I'm reasonably sure that I eroded my effectiveness. (Participant #933, Personal Communication, December, 2015)

The following quotation is a representative example of the ESCI behavioral indicator “leads by bringing out the best in people”.

… and he wrote me a letter sometime after that and it was really one of the highlights of my career. To just see him get out of the rat race he felt he was in. (Participant #909, Personal Communication, February, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “leads by articulating a compelling vision”.

I've also learned that sometimes you just need to set a philosophy and then just get the hell out of the way. Let other people do the work. (Participant #911, Personal Communication, January, 2016)

Teamwork. The ESCI model defines the teamwork competency as one’s ability to develop and leverage connected relationships in an effort to establish commitment to a collective effort (Boyatzis & McKee, 2005). According to the model, the teamwork competency consists of 6 behavioral indicators: 1) *does not cooperate with others*, 2) *works well in teams by being supportive*, 3) *works well in teams by encouraging cooperation*, 4) *works well in teams by soliciting others’ input*, 5) *works well in teams by being respectful of others*, and 6) *works well in teams by encouraging participation of*
everyone present. Table 22 below provides a summary of the total number of incidences of each behavioral indicator included in the teamwork competency.

Table 22. Total Number of Incidences of Behavioral Indicators for the Teamwork Competency

<table>
<thead>
<tr>
<th>Competency</th>
<th>Behavioral Indicator</th>
<th># Incidences</th>
<th>Participants N = 35</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teamwork</td>
<td>Doesn't cooperate with others</td>
<td>6</td>
<td>6</td>
<td>17%</td>
</tr>
<tr>
<td></td>
<td>Works well in teams by being supportive</td>
<td>3</td>
<td>3</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Works well in teams by encouraging cooperation</td>
<td>12</td>
<td>7</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td>Works well in teams by soliciting others’ input</td>
<td>37</td>
<td>23</td>
<td>66%</td>
</tr>
<tr>
<td></td>
<td>Works well in teams by being respectful of others</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Works well in teams by encouraging participation of everyone present</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

The following quotation is a representative example of the ESCI behavioral indicator “does not cooperate with others”.

I really didn't make sure that everybody was on the same page… (Participant #901, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “works well in teams by being supportive”.

You have to be supportive. It has to be important, but it's tricky. (Participant #908, Personal Communication, February, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “works well in teams by encouraging cooperation”.

I'm all about stabilization, that's why pulling people together, getting to work together rather than being a dictator is my style. (Participant #932, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “works well in teams by soliciting others’ input”.

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If I find that something is beginning to bother me or worry me, the first place I go to is to think about my colleagues and who I could go to for advice. (Participant #906, Personal Communication, February, 2016)

There are no notable quotes to represent the ESCI behavioral indicator “works well in teams by being respectful of others”.

There are no notable quotes to represent the ESCI behavioral indicator “works well in teams by encouraging participation of everyone present”.

**ESCI results by percentage of participants.** For the purposes of this analysis, I looked at the competencies within the ESCI model that contribute to one’s ability to deal with stress. Therefore, to better understand the ESCI results, it helps to view them in descending order of frequency by competency. In Table 23, I re-present the results of the 12 ESCI competencies and report the information in descending order of the percentage of participants who provided examples of each competency. For example, the competency of *emotional self-control* was reported by the highest percentage of participants at 94%. Following the table, I provide a brief description of the results for each of the 12 competencies.
Table 23. Results of ESCI Coding Analysis Sorted by % of Participants

<table>
<thead>
<tr>
<th>Titles</th>
<th># Incidences</th>
<th>Participants N = 35</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional self-control</td>
<td>77</td>
<td></td>
<td>94</td>
</tr>
<tr>
<td>Conflict management</td>
<td>78</td>
<td></td>
<td>89</td>
</tr>
<tr>
<td>Emotional self-awareness</td>
<td>76</td>
<td></td>
<td>89</td>
</tr>
<tr>
<td>Teamwork</td>
<td>57</td>
<td></td>
<td>86</td>
</tr>
<tr>
<td>Empathy</td>
<td>45</td>
<td></td>
<td>66</td>
</tr>
<tr>
<td>Coach and mentor</td>
<td>40</td>
<td></td>
<td>63</td>
</tr>
<tr>
<td>Achievement orientation</td>
<td>26</td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Organizational awareness</td>
<td>28</td>
<td></td>
<td>54</td>
</tr>
<tr>
<td>Adaptability</td>
<td>25</td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>Inspirational leadership</td>
<td>17</td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>Positive outlook</td>
<td>10</td>
<td></td>
<td>23</td>
</tr>
<tr>
<td>Influence</td>
<td>6</td>
<td></td>
<td>14</td>
</tr>
</tbody>
</table>

The ESCI competency reported by the highest percentage of participants at 94% was the emotional self-control competency, which falls under the self-management competency cluster. Two competencies were reported by 89% of all study participants: 1) conflict management, which falls under the relationship management cluster; and 2) emotional self-awareness, which falls under the self-awareness competency cluster.

Eighty-six percent of all participants reported examples of the teamwork competency, which falls under the relationship management competency cluster. The coach and mentor competency, which also falls under the relationship management competency cluster, was reported by 63% of all participants. Examples of achievement orientation, a competency within the self-management competency cluster, were provided by 57% of all participants. Under the competency cluster of social awareness, the competency of organizational awareness was reported by 54% of all participants. Examples of adaptability, a competency within the self-management competency cluster, were reported by 46% of all participants. The competency of inspirational leadership, which
falls under the *relationship management* competency cluster, was reported by 31% of all participants. The competency of *positive outlook*, which falls under the *self-management* competency cluster, was reported by 23% of all participants. And finally, 14% of all participants reported examples of the *influence* competency, which falls under the *relationship management* competency cluster.

**Deductive thematic analysis summary.** Following the inductive thematic analysis, I coded the data using the coding heuristic of the Emotional and Social Competency Inventory (ESCI) model. I had three primary goals with respect to this approach. First, I wanted to add to the depth of understanding of the thematic results by analyzing the data using a predetermined coding scheme based on previous emotional intelligence research. Second, I wanted to assess the degree of alignment between the thematic results and the ESCI coding results. This approach served as an essential prelude to a deeper reflection about EI competencies that contribute to one’s ability to deal with stress. I discuss the comparison between the thematic analysis results and the ESCI coding results at the end of this chapter. Third, I wanted to compare the quantitative results of the ESCI coding process with the quantitative results of the Maslach Burnout Inventory. I discuss this comparison in the next section of this chapter.

**Quantitative Data Analysis Results**

As described in chapter 3, this study was designed to gain insight into CMOs’ experiences with work-related stress and if, and how, possession of certain EI competencies contribute to their ability to deal with work-related stress. Due to the phenomenological nature of the topic, the primary method of analysis was designed to focus on a deep understanding of the qualitative data. To add further depth to the
understanding of this data and to aide in answering the study’s research questions, I chose to also collect quantitative data. My objective in doing so was to measure the degree of perceived stress experienced by participants and to understand the relationship between stress and the three dimensions of burnout—emotional exhaustion, cynicism, and diminished professional efficacy.

In the following sections, I present the results of the quantitative data analysis process. I begin by presenting the findings from the analysis of two separate quantitative data sets: 1) results from the Maslach Burnout Inventory (MBI) instrument, and 2) results from the Emotional and Social Competency Inventory (ESCI) data coding process. I conclude this section with a comparison of the MBI quantitative data and the ESCI quantitative data.

Results from the Maslach Burnout Inventory (MBI) Survey. In the following sections I present the results of several statistical analyses completed with the MBI data. First, I present the means and standard deviations of four key variables: 1) stress, 2) emotional exhaustion, 3) cynicism, and 4) professional efficacy. Next, I present the results of Pearson and Spearman correlation tests, which were run to test what, if any, relationship exists between the four variables. I then present the results of t-tests, which were run to check for mean differences amongst two groups of data: 1) years in CMO role and 2) CMO age. I conclude this section with a presentation of the results of a regression analysis, which was run to test whether stress levels could be predicted using the variables of emotional exhaustion, cynicism, and professional efficacy.

Means and Standard Deviations of Variables. Table 24 identifies the means for the four key variables being analyzed to better establish if there is a relationship between
a CMO’s perceived level of work-related stress and their experiences with the three
dimensions of burnout—emotional exhaustion, cynicism, and professional efficacy.
Using a six-point frequency scale, participants were asked five questions for exhaustion,
five questions for cynicism, and six questions for professional efficacy. These 16
questions measured the frequency with which participants experience certain feelings
associated with their work. These frequencies range from never (0) to every day (6).
Additionally, participants were asked to rate their current level of stress on a 1-10 scale,
where a score of 1 or 2 = mild, 3 or 4 = moderate, 5 or 6 = severe, 7 or 8 = very severe,
and 9 or 10 = worst possible. Stress levels were measured at a single point in time,
reflecting one’s experiences with stress related to current job conditions. Totals were
calculated for stress, exhaustion, cynicism, and professional efficacy with a potential total
score of 10, 30, 30, and 36 respectively.

The mean for stress was calculated at 5.1 (severe) out of a possible 10 with a
standard deviation (SD) of 2.0. Although the SD shows that there is a large degree of
variance within the scores for stress, 69% of all participants reported experiencing severe,
very severe, or worst possible stress. The mean score related to exhaustion was 10.3 with
a SD of 6.4. Cynicism had a low mean score of 6.4 with a SD of 5.5. Although the SD
seems quite high in comparison to the mean, only 17% of the participants had a total
cynicism score higher than 10, reflecting that a large majority of the population indicates
low levels of cynicism. Cynicism is similar to exhaustion in that they both have a high
SD, 5.5 and 6.4 respectively. The data show that CMOs who participated in this study are
quite confident in their self-reported professional efficacy as seen with a mean of 30.6 on
a scale of 36 and a very small SD of 2.0.
Table 24. **Means and Standard Deviations for Stress, Exhaustion, Cynicism, and Professional Efficacy**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>5.1</td>
<td>2.0</td>
</tr>
<tr>
<td>Emotional Exhaustion</td>
<td>10.3</td>
<td>6.4</td>
</tr>
<tr>
<td>Cynicism</td>
<td>6.4</td>
<td>5.5</td>
</tr>
<tr>
<td>Professional Efficacy</td>
<td>30.6</td>
<td>2.0</td>
</tr>
</tbody>
</table>

**Correlations.** A Pearson correlation was run to test whether there is a relationship between stress and the three dimensions of burnout—emotional exhaustion, cynicism, and professional efficacy. The results reported in Table 25 show that all three variables have a significant relationship with stress. Emotional exhaustion shows a moderately strong positive relationship with stress at 0.693. Cynicism shows a moderately weak positive relationship with stress at 0.365. There is a moderately weak negative relationship between stress and professional efficacy at −0.440. The negative relationship indicates that the stress score decreases as the professional efficacy score increases, and vice versa.

Table 25. **Pearson Correlations of Stress with Emotional Exhaustion, Cynicism, and Professional Efficacy**

<table>
<thead>
<tr>
<th></th>
<th>Emotional Exhaustion</th>
<th>Cynicism</th>
<th>Professional Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>0.693**</td>
<td>0.365*</td>
<td>−0.440**</td>
</tr>
</tbody>
</table>

Note. * denotes correlation is significant at the 0.05 level (1-tailed); ** denotes correlation is significant at the 0.01 level (2-tailed).

A second Pearson correlation was run to assess the relationship among all four variables. As reported in Table 26, professional efficacy has a significant negative relationship with cynicism at −0.505 and with emotional exhaustion at −0.607. Cynicism has a similarly strong positive relationship with emotional exhaustion at 0.602.
Table 26. Full Variable Pearson Correlations among Stress, Emotional Exhaustion, Cynicism, and Professional Efficacy

<table>
<thead>
<tr>
<th></th>
<th>Stress</th>
<th>Cynicism</th>
<th>Professional Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cynicism</td>
<td></td>
<td>0.365*</td>
<td></td>
</tr>
<tr>
<td>Professional Efficacy</td>
<td>-0.440**</td>
<td>-0.505**</td>
<td></td>
</tr>
<tr>
<td>Emotional Exhaustion</td>
<td>0.693</td>
<td>0.602**</td>
<td>-0.607**</td>
</tr>
</tbody>
</table>

Note. * denotes correlation is significant at the 0.05 level (1-tailed); ** denotes correlation is significant at the 0.01 level (2-tailed).

A Spearman correlation takes into account years in the CMO role, age, and their relationships with the four variables of stress, emotional exhaustion, cynicism, and professional efficacy. The results reported in Table 27 show that only one variable, exhaustion, showed significance with regard to age. Age has a moderately weak, negative relationship with age, meaning the younger CMOs reported higher levels of exhaustion.

In relation to years in the CMO role, the only significant variable was stress. Stress and years in a CMO role have a negative and moderately weak relationship, meaning the fewer years a CMO has been in his or her role, the more stress they reported.

Table 27. Age and Years as a CMO Spearman Correlations

<table>
<thead>
<tr>
<th></th>
<th>Stress</th>
<th>Cynicism</th>
<th>Exhaustion</th>
<th>Professional Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.283</td>
<td>-0.104</td>
<td>-0.345*</td>
<td>-0.031</td>
</tr>
<tr>
<td>Years in a CMO role</td>
<td>-0.453**</td>
<td>-0.013</td>
<td>-0.283</td>
<td>0.209</td>
</tr>
</tbody>
</table>

Note. * denotes correlation is significant at the 0.05 level (1-tailed); ** denotes correlation is significant at the 0.01 level (2-tailed).

T-tests. Table 28 represents a comparison of the two categories that make up years in a CMO role. The results show that the means are quite similar for emotional exhaustion, cynicism, and professional efficacy. It is important to note that the SD is very large for all groups, which demonstrates a great deal of variance, or spread, in the data.

I tested all variables to see if t-tests were appropriate. I then ran t-tests to check for mean differences between the groups. As shown in Table 28, the only t-test that

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proved to be significant ($p = 0.051$) was stress. Participants who have been in a CMO role for more than five years reported lower levels of stress (4.23) as compared to their counterparts who have been a CMO for 5 years or less (5.64). Interestingly, the standard deviations are the lowest for the 5 year or less category.

Table 28. Means and Standard Deviations for Stress, Exhaustion, Cynicism, and Professional Efficacy by Years in CMO Role

<table>
<thead>
<tr>
<th>Variable</th>
<th>5 Years of Less</th>
<th>Above 5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Stress*</td>
<td>5.64</td>
<td>1.92</td>
</tr>
<tr>
<td>Emotional Exhaustion</td>
<td>11.05</td>
<td>6.90</td>
</tr>
<tr>
<td>Cynicism</td>
<td>6.95</td>
<td>5.77</td>
</tr>
<tr>
<td>Professional Efficacy</td>
<td>29.91</td>
<td>5.10</td>
</tr>
</tbody>
</table>

Note. * denotes that the t-test showed significance with a $p$ value of 0.05.

A t-test was also run to test for mean differences between the two age groupings, 55 and under and 56 and over. As shown in Table 29, the means are quite similar between the two groups for cynicism and stress when compared to age. The only t-test that proved to be significant ($p = 0.044$) is related to exhaustion. This test shows that participants who are 56 and over report lower levels of emotional exhaustion (8.88) as compared to their 55 and under counterparts (13.55). Stress shows a difference between the two groupings but was just under the threshold that would be considered significant, with a $p$-value of 0.057.

Table 29. Means and Standard Deviations for Stress, Exhaustion, Cynicism, and Professional Efficacy by Age

<table>
<thead>
<tr>
<th>Variable</th>
<th>55 Years and Under</th>
<th>56 Years and Over</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Stress</td>
<td>6.09</td>
<td>1.97</td>
</tr>
<tr>
<td>Emotional Exhaustion*</td>
<td>13.55</td>
<td>6.86</td>
</tr>
<tr>
<td>Cynicism</td>
<td>7.64</td>
<td>6.77</td>
</tr>
<tr>
<td>Professional Efficacy</td>
<td>30.55</td>
<td>4.63</td>
</tr>
</tbody>
</table>

Note. * denotes that the t-test showed significance with a $p$ value of 0.05.
Regression analysis. A step-wise regression was used to determine whether stress levels could be predicted using the variables of cynicism, emotional exhaustion and professional efficacy. The results are shown below in Tables 30, 31, and 32. The R of 0.727 demonstrates a moderately strong relationship among the four variables. The R square of 0.529 shows that 53% of the dependent variable (stress) can be explained by the three independent variables used in the analysis. Of the three variables analyzed, only emotional exhaustion was significant (0.001) at p = 0.05. The beta for the unstandardized coefficient was 0.235, indicating that a one unit change in the independent variable, emotional exhaustion, would represent a mean change in the dependent variable, stress, of 0.235. The R and the VIF scores were analyzed to check for multi-collinearity among the variables and none was found.

Table 30. Step-wise Regression Analysis for Stress using Cynicism, Exhaustion, and Professional Efficacy

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>SEM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0.727\textsuperscript{a}</td>
<td>0.529</td>
<td>0.480</td>
<td>1.519</td>
</tr>
</tbody>
</table>

Note. \textsuperscript{a} denotes predictors: (Constant), Professional Efficacy Total Score, Cynicism Total Score, Exhaustion Total Score

Table 31. Step-wise Regression Analysis with Cynicism, Exhaustion, and Professional Efficacy Predicting Stress

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regression</td>
<td>74.992</td>
<td>3</td>
<td>24.997</td>
<td>10.838</td>
<td>0.000\textsuperscript{a}</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>66.887</td>
<td>29</td>
<td>2.306</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>141.790</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. df = degrees of freedom; F = a ratio of variability between groups to variability within groups; \textsuperscript{a} denotes predictors: (Constant), Professional Efficacy Total Score, Cynicism Total Score, Exhaustion Total Score
Table 32. *Step-wise Regression Indicators for Stress*

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Standard Error</th>
<th>Beta</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>2.848</td>
<td>2.693</td>
<td>1.057</td>
<td>0.299</td>
<td></td>
</tr>
<tr>
<td>Cynicism</td>
<td>-0.009</td>
<td>0.064</td>
<td>-0.022</td>
<td>-0.136</td>
<td>0.892</td>
</tr>
<tr>
<td>Exhaustion</td>
<td>0.235</td>
<td>0.057</td>
<td>0.731</td>
<td>4.143</td>
<td>0.000</td>
</tr>
<tr>
<td>Stress</td>
<td>-0.007</td>
<td>0.074</td>
<td>-0.015</td>
<td>-0.090</td>
<td>0.929</td>
</tr>
</tbody>
</table>

Note. B = unstandardized weight; Beta = standardized weight; t = statistics that test for the significance of each variable.

**Summary of MBI results.** Several key results emerged as a result of statistical analyses performed on the MBI data. In the following paragraphs, I briefly summarize these results.

First, means and standard deviations provide insights into the average and range of scores of four key variables—stress, emotional exhaustion, cynicism, and professional efficacy. For example, participants reported a mean score of 5.1 regarding their current perceived level of stress. This mean score translates to a self-reported stress level of *severe*. Furthermore, 31% of all participants reported a current perceived stress level of 7 or higher, which translates to *very severe* or *worst possible*. Reports of emotional exhaustion and cynicism showed low means at 10.3 and 6.4, respectively, out of a possible 30. Reports of professional efficacy showed a high mean at 30.6 out of a possible 36.

Second, Pearson correlation testing shows that the three dimensions of burnout—emotional exhaustion, cynicism, and professional efficacy—all have a significant relationship with the stress variable. The strongest relationship is between stress and emotional exhaustion, which shows a moderately strong positive relationship with stress at 0.693. Significant relationships also exist among the three dimensions of burnout.
Professional efficacy has a significant negative relationship with emotional exhaustion as well as with cynicism. Emotional exhaustion and cynicism have a strong positive relationship.

Third, Spearman correlation testing showed that only the emotional exhaustion variable has a moderately weak, negative relationship with age, meaning the younger CMOs reported higher levels of exhaustion. A second Spearman correlation test showed that only the stress variable has a moderately weak, negative relationship with year in the CMO role, meaning the fewer years a CMO has been in his or her role, the more stress they reported.

Fourth, t-tests show that CMOs who have been in their role for more than five years reported lower levels of stress (4.23) as compared to CMOs who have been in their role for five years or less (5.64). Regarding CMO age, the only t-test that proved to be significant (0.044) is related to emotional exhaustion, with younger CMOs reporting lower levels of emotional exhaustion (8.88) compared to CMOs who are 55 and older (13.55).

Finally, a step-wise regression analysis shows that 53% of the dependent variable (stress) can be explained by the three independent variables used in the analysis—emotional exhaustion, cynicism, and professional efficacy. Of the three independent variables, only emotional exhaustion was significant (0.001) at p = 0.05. These results indicate that a one unit change in the independent variable, emotional exhaustion, would represent a mean change in the dependent variable, stress, of 0.235.

Results from the Emotional and Social Competency Inventory (ESCI) coding process. As described earlier in Chapter 4, I completed a deductive analysis using the
Emotional and Social Competency Inventory (ESCI) model to guide my coding of the qualitative data. Upon completion of the data coding process, I counted the number of occurrences of each behavioral indicator within each competency. Due to the categorical nature of the data, a frequency chart was used to show which competency clusters and competencies yielded the highest counts during the interviews.

Table 33 below shows the total number and total percentage of participants who showed evidence of each competency cluster and each competency. Also reported in this table are the total number and total percentage of incidences for each competency cluster and each competency. For example, the competency cluster of relationship management shows the highest overall incidences at 198. Within the relationship management competency cluster, the conflict management competency shows the highest noted incidences at 78 with a total of 31 participants (89% of the total number of participants) noting the incidence of this competency.

### Table 33. ESCI Incidences

<table>
<thead>
<tr>
<th>Titles</th>
<th># Incidences</th>
<th>Participants (N = 35) %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Competency Cluster: Self-Awareness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional self-awareness</td>
<td>76</td>
<td>31</td>
</tr>
<tr>
<td>Competency Cluster: Self-Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional self-control</td>
<td>138</td>
<td>35</td>
</tr>
<tr>
<td>Achievement orientation</td>
<td>77</td>
<td>33</td>
</tr>
<tr>
<td>Adaptability</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>Positive outlook</td>
<td>25</td>
<td>16</td>
</tr>
<tr>
<td><strong>Competency Cluster: Social Awareness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>73</td>
<td>28</td>
</tr>
<tr>
<td>Organizational awareness</td>
<td>45</td>
<td>23</td>
</tr>
<tr>
<td><strong>Competency Cluster: Relationship Management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conflict management</td>
<td>198</td>
<td>34</td>
</tr>
<tr>
<td>Teamwork</td>
<td>78</td>
<td>31</td>
</tr>
<tr>
<td>Coach and mentor</td>
<td>57</td>
<td>30</td>
</tr>
<tr>
<td>Inspirational leadership</td>
<td>40</td>
<td>22</td>
</tr>
<tr>
<td>Influence</td>
<td>17</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Participants</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

141
Table 34 shows the data grouped by years in a CMO role. CMOs in the position for five years or less were observed at a higher rate (greater than 10% above the over five years group) with regards to the ESCI competencies of *emotional self-control, teamwork, empathy, organizational awareness,* and *inspirational leadership.* The only area that CMOs in the job for over five years scored greater than 10% over the younger group was the *achievement orientation* competency. Chi-squares were run where appropriate and none of the analyses were significant.

Table 34. *ESCI Incidences by Years in a CMO Role*

<table>
<thead>
<tr>
<th>Titles</th>
<th>Participants</th>
<th></th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 Years and</td>
<td>N = 22</td>
<td>%</td>
</tr>
<tr>
<td><strong>Competency Cluster: Self-Awareness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional self-awareness</td>
<td>18</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>Competency Cluster: Self-Management</td>
<td>22</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Emotional self-control</td>
<td>21</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>Achievement orientation</td>
<td>10</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Adaptability</td>
<td>7</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Positive outlook</td>
<td>9</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td><strong>Competency Cluster: Social Awareness</strong></td>
<td>20</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td>Empathy</td>
<td>15</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Organizational awareness</td>
<td>15</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td><strong>Competency Cluster: Relationship Management</strong></td>
<td>21</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>Conflict management</td>
<td>17</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>Teamwork</td>
<td>18</td>
<td>82</td>
<td></td>
</tr>
<tr>
<td>Coach and mentor</td>
<td>13</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Inspirational leadership</td>
<td>8</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Influence</td>
<td>3</td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

Table 35 shows the data grouped by participant age. The most notable differences between the groups (greater than 10% difference in participation) appear in the ESCI competencies of *conflict management, adaptability, self-awareness* and *social awareness.*
In each instance, the 56 and over age group had the higher percentage of participants.

Chi-squares were run where appropriate and none of the analyses were significant.

Table 35. *ESCI Incidences by Participant Age*

<table>
<thead>
<tr>
<th>Titles</th>
<th>Participants Age 55 and Under</th>
<th>Participants Age 56 and Over</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 11</td>
<td>N = 24</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td><strong>Competency Cluster: Self-Awareness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional self-awareness</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>72</td>
<td>83</td>
</tr>
<tr>
<td><strong>Competency Cluster: Self-Management</strong></td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>Emotional self-control</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Achievement orientation</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>46</td>
</tr>
<tr>
<td>Adaptability</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>42</td>
</tr>
<tr>
<td>Positive outlook</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>63</td>
</tr>
<tr>
<td><strong>Competency Cluster: Social Awareness</strong></td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>Empathy</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>63</td>
</tr>
<tr>
<td>Organizational awareness</td>
<td>6</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>54</td>
</tr>
<tr>
<td><strong>Competency Cluster: Relationship Management</strong></td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>Conflict management</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>72</td>
<td>83</td>
</tr>
<tr>
<td>Teamwork</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>82</td>
<td>75</td>
</tr>
<tr>
<td>Coach and mentor</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>58</td>
</tr>
<tr>
<td>Inspirational leadership</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>36</td>
<td>25</td>
</tr>
<tr>
<td>Influence</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>13</td>
</tr>
</tbody>
</table>

**MBI quantitative data compared to ESCI quantitative data.** A Spearman correlation was run to test whether there is a relationship between the ESCI total scores and the four variables on the Maslach Burnout Inventory—stress, emotional exhaustion, cynicism, and professional efficacy. These results are presented in Table 36. Only one relationship was significant. The ESCI scores and cynicism had a negative and moderately weak correlation. The negative relationship indicates that the cynicism scores increase as the ESCI scores decrease, and vice versa. The ESCI data was collapsed into two categories, and a t-test was performed to check for differences between those who
scored from 0–11 on the ESCI and those who scored 11 and above. The t-test showed there was no significance.

Table 36. Spearman Correlations between ESCI and Stress, Cynicism, Exhaustion, and Professional Efficacy

<table>
<thead>
<tr>
<th></th>
<th>Stress</th>
<th>Cynicism</th>
<th>Exhaustion</th>
<th>Professional Efficacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESCI</td>
<td>0.063</td>
<td>−0.383*</td>
<td>−0.073</td>
<td>0.067</td>
</tr>
</tbody>
</table>

Note. * denotes correlation is significant at the 0.05 level (2-tailed).

Quantitative data analysis summary. As described throughout this chapter, the primary method of analysis for this study was designed to focus on a deep understanding of the qualitative data. I chose to also collect and analyze quantitative data to add further depth to the understanding of the qualitative data and to aide in answering the study’s research questions. Specifically, I wanted to measure the degree of perceived stress experienced by participants and its relationship to the three dimensions of burnout—emotional exhaustion, cynicism, and professional efficacy. Several key results emerged from the quantitative data analysis.

First, participants reported a mean score of 5.1 regarding their current perceived level of stress, which translates to a self-reported level of severe. Furthermore, 69% of all participants reported a current perceived level of stress of 5 or higher, which translates to severe, very severe, or worst possible. Participants reported a high level of professional efficacy with a mean of 30.6 out of a possible 36.

Second, Pearson correlation testing shows that the three dimensions of burnout—emotional exhaustion, cynicism, and professional efficacy—all have a significant relationship with the stress variable. Significant relationships also exist among the three dimensions of burnout.
Third, Spearman correlation testing shows that only the emotional exhaustion variable has a moderately weak, negative relationship with age, meaning the younger CMOs reported higher levels of exhaustion. A second Spearman correlation test shows that only the stress variable has a moderately weak, negative relationship with year in the CMO role, meaning the fewer years a CMO has been in his or her role, the more stress they reported.

Fourth, t-tests show that CMOs who have been in their role for more than five years reported lower levels of stress (4.23) as compared to CMOs who have been in their role for five years or less (5.64). Regarding CMO age, the only t-test that proved to be significant (0.044) is related to emotional exhaustion, with younger CMOs reporting higher levels of emotional exhaustion (13.55) as compared to CMOs who are 55 and older (8.88).

Fifth, a step-wise regression analysis shows that 53% of the dependent variable (stress) can be explained by the three independent variables used in the analysis—emotional exhaustion, cynicism, and professional efficacy. Of the three independent variables, only emotional exhaustion showed to be significant (0.001) at p = 0.05. These results indicate that a one unit change in the independent variable, emotional exhaustion, would represent a mean change in the dependent variable, stress, of 0.235.

Finally, a comparison of the ESCI quantitative results to the MBI quantitative results shows that only one relationship—ESCI and cynicism—was significant with a moderately weak negative relationship. The negative relationship indicates that the cynicism scores increase as the ESCI scores decrease, and vice versa.
In summary, the results of the quantitative data analysis add depth to the meaning of the qualitative data and also help answer the study’s research questions. These results also aide in understanding the degree of perceived stress experienced by participants and the relationship between stress and the three dimensions of burnout.

**Thematic analysis results compared with ESCI coding of the data.** Previous sections of this chapter presented the results of four separate analyses: 1) thematic analysis of the qualitative data using inductive coding methods, 2) a deductive analysis of the qualitative data using the ESCI coding model, 3) quantitative analyses of the Maslach Burnout Inventory data, and 4) quantitative analyses of the ESCI quantitative data. In this section, I compare the results of the thematic analysis to the results of the ESCI coding of the data.

As previously described, I completed the thematic analysis (i.e., inductive analysis) prior to assigning ESCI codes to the qualitative data (i.e., deductive analysis). In doing so, the results of the thematic analysis emerged from the transcripts independent of the deductive analysis and were not influenced by the coding heuristic of the ESCI model. As I analyzed the results of the two data sets together, I found that several themes emerging from the inductive analysis showed a relationship to one or more ESCI competencies. These relationships are important to understand in that they add depth to the meaning of the qualitative data and strengthen the study’s findings. In the following section, I compare the results of the thematic analysis to the ESCI coding of the qualitative data and describe the degree of alignment between the two.

Figure 2 shows a comparison between five inductive themes and/or sub-themes and ESCI competencies. I chose to present the results of themes and ESCI competencies
that show the highest percentage of participant responses and show the greatest degree of alignment between the two measures. For example, 89% of all participants spoke of *self-insight factors* that influence their ability to manage stress compared to 89% of all participants who provided examples of *self-awareness* ESCI behaviors as they spoke of ways in which they manage stress. This particular comparison shows the strength of the ESCI competency as well as the degree of alignment between the thematic coding of the data and the ESCI coding of the data.

*Figure 2. Comparison between inductive themes and ESCI competencies*

In the following paragraphs, I present the results of a comparison between five inductive themes and/or sub-themes and ESCI competencies. This comparison includes the definitions of the inductive theme and/or sub-theme(s) and the ESCI competency, and it discusses the degree of alignment between the two. Quotations are included to show the strength of alignment between the two measures.
First, the inductive coding of data indicated a strong presence of the theme *self-insight*, which is similar to *self-awareness* in the ESCI model. The two are similar in that they both have to do with one’s understanding and awareness of his or her emotions, skills, and abilities. Both the thematic analysis and the ESCI coding found that 89% of all participants reported examples of these abilities as they discussed dealing with a stressful experience. Participants said that having an awareness of their stress helps them to understand how it is impacting them and acts as a mediator in the cognitive process in which they consider their response options when presented with a stressor. Taken together, these findings show that an understanding of one’s emotions, skills and abilities are important contributors to one’s ability to deal with stress.

I think it made me be more aware that when I felt frustrated or when I could hear myself getting that way, that I just would not allow myself to react. (Participant #917, Personal Communication, November, 2015)

Second, the results show a moderate degree of alignment between the sub-theme *manages emotions and behaviors* (71%) and the ESCI competency of *emotional self-control* (94%). Both definitions have to do with one’s ability to stay calm, control impulses, and act appropriately in emotionally charged situations. As participants spoke of refraining from lashing out or saying something they knew they would regret, they described how their calm demeanor and composed response de-escalated their stress and led to a more productive outcome.

I’m going to calm down and then next week, wait a couple of days, and when I’m no longer angry, when I can respond to this email without any emotion whatsoever, then I’ll send her an email and say, ‘I'm sorry we don't agree. My opinion is very different, here's why,’ and just leave it at that. (Participant #913, Personal Communication, January, 2016)
Third, the results show a moderate degree of alignment between the sub-theme '+surfaces and manages conflict' (66%) and the ESCI competency 'conflict management' (89%). Both definitions relate to bringing conflict out into the open by talking about disagreements with those involved. These definitions are also alike in that they have to do with de-escalating the emotions in a situation as a way to resolve conflict. Participants described examples of channeling their anxiety and emotions into problem-solving rather than allowing the situation to bother them. They also spoke of not taking conflict situations personally when in a disagreement with a colleague. Doing so, they say, helps them keep their emotions in check and keeps them focused on resolving the disagreement.

I dealt with the stress by basically solving the problem and trying not to allow it to become emotional, and channeling whatever anxiety I had into problem-solving. (Participant #9109, 2015)

Fourth, the inductive coding of data showed a strong presence of the sub-theme '+stays connected to others', which is similar to the ESCI competency of 'teamwork'. The two are similar in that they are both related to collaborating with others to achieve goals. Key components of both definitions include offering support to others, encouraging cooperation, and soliciting others’ input. There is a strong degree of alignment between the sub-theme of '+stays connected to others' (91%) and the ESCI code of 'teamwork' (86%). Participants spoke of staying connected to trusted work colleagues as a means to help them work through challenges. Doing so, they say, helps them feel less isolated and provides them with valuable advice and input to help them through a challenge.

I've got a wonderful group of colleagues on the administrative side and on the clinical side and I reach out on a regular basis. If I find that something is beginning to bother me or worry me, the first place I go to is to think about my
colleagues and who I could go to for advice. (Participant #906, Personal Communication, February, 2016)

Finally, the inductive coding of data indicated a strong presence of the sub-theme actively listens and seeks to understand others, which is similar to the ESCI competency of empathy. Both the thematic analysis and the ESCI coding found that 66% of all participants reported examples of empathy as they discussed dealing with a stressful experience. They spoke of the importance of being attuned to others’ perspectives, attitudes, and beliefs when having a difficult conversation with a colleague. They described examples of how validating others’ feelings and thoughts can quickly de-escalate tension, and they also discussed how focusing less on themselves and more on others causes them to feel less stress.

Trying to get to the next level of understanding, asking more questions and listening are some of the techniques. You've actually got to show empathy to whatever the issue is and the person. I spend time listening. (Participant #927, Personal Communication, December, 2015)

Thematic analysis results compared with ESCI coding of the data summary. This section compared the results of the thematic analysis to the ESCI coding of the qualitative data and described the degree of alignment between the two. I presented the results of five inductive themes and/or sub-themes compared to the ESCI competencies that showed the highest percentage of participant responses and the greatest degree of alignment between the two measures. This comparison shows the strength of the ESCI competencies and shows a strong degree of alignment between the two separate coding processes.
Conclusion

The goal of Chapter 4 was to present and describe the study’s results. Qualitative data was analyzed following two different strategies—inductive thematic analysis and deductive thematic analysis using the ESCI coding heuristic—and quantitative data was analyzed using inferential statistic techniques. Chapter 4 reported on the results of these analyses and did not include an elaboration or interpretation of the results. Chapter 5 presents the outcome of my reflection and interpretation of the results in the form of the study’s findings, and discusses implications for practice and future research.
CHAPTER 5: DISCUSSION AND IMPLICATIONS

In this chapter, I discuss my interpretations of this study’s results and present three overarching findings. When taken in their entirety, these findings represent the meaning I have made of the results in light of the study’s research questions. I also discuss findings that go beyond the research questions and add relevance to the understanding of other issues linked to the topics of occupational stress, emotional intelligence, and the role of a CMO. Following a discussion of the study’s findings, I discuss limitations of this study and present implications for further research and implications for practice. Throughout this chapter, I make extensive use of participant quotations. Any repetition of quotes from the previous chapter is intended to provide direct support of my assertions of certain points.

Findings

When I synthesized and analyzed the results presented in Chapter 4, three themes emerged from the data. The first theme provides insight into the first research question and the second research question: Do Chief Medical Officers perceive that work-related stress impacts their wellbeing and/or leadership effectiveness? If so, how? And, Do Chief Medical Officers perceive that emotional exhaustion, cynicism, and/or diminished professional efficacy impact their leadership effectiveness? The second theme provides insight into the third research question: Do Chief Medical Officers perceive that emotional intelligence competencies contribute to their ability to deal with work-related stress? If so, how? The third theme goes beyond the research questions to explain the role that self-efficacy has on the stress appraisal and coping processes.
Given the centrality of the third research question to the objectives of this study, I first present the findings related to CMOs’ perceptions of EI competencies that contribute to their ability to deal with work-related stress. I then discuss the findings related to research questions one and two. I conclude with a discussion of the third theme related to how self-efficacy contributes to one’s ability to deal with stress.

**Finding #1: EI competencies serve as an effective personal resource that contributes to CMOs’ ability to deal with work-related stress and prevent burnout.**

Finding #1 answers research question #3: *Do Chief Medical Officers perceive that emotional intelligence competencies contribute to their ability to deal with work-related stress? If so, how?* As described throughout this dissertation, CMOs play an essential leadership role in healthcare organizations. In these roles, they are prone to high degrees of stress brought on by external environmental factors, organizational factors, individual factors, and transitional factors. To maintain their leadership effectiveness, they must be able to productively deal with these stressors. This study focused on examining personal resources that enhance CMOs’ stress management abilities and found that certain EI competencies serve as an effective personal resource that greatly contributes to their ability to deal with work-related stress. In the following paragraphs, I discuss five EI competencies found by this study to have the greatest impact on a CMO’s ability to deal with work-related stress: 1) emotional self-awareness, 2) empathy, 3) emotional self-control, 4) teamwork, and 5) conflict management.

*Emotional self-awareness.* The thematic analysis results found that self-insight factors contribute to participants’ ability to deal with stress. This theme is similar to the ESCI competency of emotional self-awareness in that they both have to do with one’s
understanding and awareness of his or her emotions, skills, and abilities. Both the thematic analysis and the ESCI coding found that 89% of all participants reported examples of these abilities as they discussed dealing with a stressful experience. Furthermore, high incidences of two specific behaviors demonstrate the relationship between the ESCI competency of emotional self-awareness and one’s ability to productively deal with stress.

First, a high rate of the ESCI behavioral indicator describes underlying reasons for own feelings provides evidence that participants are aware of and can articulate the factors that are triggering their stress. One participant described the greatest source of stress as “I have a disruptive relationship with colleagues at the leadership level” (Participant #906, Personal Communication, February, 2016). Second, a high rate of the ESCI behavioral indicator shows awareness of own feelings provides evidence that participants are attuned to and understand their feelings. Taken together with the thematic analysis results, this indicates that a significant contributor to one’s ability to deal with a stressful situation begins with recognizing the presence of feelings of stress. As one participant described, “when there's stress at work, I do recognize it. I know when I'm feeling stressed about something, and I think that's a start” (Participant #9109, 2015). By first understanding and then examining the sources of their frustration or anxiety, CMOs describe a heightened sense of cognition as they consider their response options.

Emotional self-management. The results of this study show a moderate degree of alignment between the sub-theme manages emotions and behaviors (71%) and the ESCI competency of emotional self-control (94%). Both definitions have to do with one’s ability to stay calm, control impulses, and act appropriately when faced with a stressor. In
doing so, participants spoke of their appropriate responses as a contributing factor in de-
escalating the tension in an emotionally charged situation. In contrast, participants
described feeling more stress in situations where they did not appropriately manage their
emotions. For example, Participant #932 said, “for me to show that anger was
emotionally stressful for me” (Participant #932, Personal Communication, January,
2016).

Findings from this study also show that emotional self-management during a
stressful encounter often requires special effort at first to get to the point where it is
mastered. This is consistent with the literature, which suggests that managing emotional
impulses is challenging mental work. When an individual breaks old habits to override
their emotional impulses, it can add to the burden of learning and possibly cause more
stress (Goleman et al., 2013). This literature adds relevance to the study’s findings,
particularly in light of participants’ descriptions of how they have learned over time to
hold back tendencies to react in a certain way. They spoke of emotional self-management
as something that can be stressful at first but becomes more natural with practice and
self-reflection. One participant, describing a stressful situation in which he was dealing
with a professional misconduct issue, said:

Those things are difficult to deal with because nobody who gets into these jobs
really has the experience dealing with that kind of stuff. Even if you've been a
division head, you deal with it in a different way. And it's stressful at first.
( Participant #924, Personal Communication, December, 2015).

The coping literature also provides support for the role that self-management
behaviors have in the coping process. Research shows that when individuals appraise a
stressful encounter as unchangeable (i.e., they believe they have a lack of control over the
situation or circumstances), they primarily deal with the stress by regulating or controlling their emotions. This process is widely referred to in the literature as emotion-focused coping (Folkman et al., 1986). In contrast, when individuals appraise a stressful encounter as changeable (i.e., something they believe they have some control over), they primarily deal with the stress by attempting to alter the conditions or the situation causing the stress. The literature refers to this as problem-focused coping. Both emotion-focused coping and problem-focused coping occur as a result of an individual managing their emotions and their behaviors, which is consistent with this particular finding from the study.

**Empathy.** The thematic analysis indicated a strong presence of the sub-theme *actively listens and seeks to understand others*, which is similar to the ESCI competency of empathy. Both the thematic analysis and the ESCI coding found that 66% of all participants reported examples of empathy as they discussed dealing with a stressful experience. They spoke of the importance of being attuned to others’ perspectives, attitudes, and beliefs when having a difficult conversation with a colleague. They described examples of how acknowledging others’ feelings and thoughts can quickly de-escalate tension, and they also discussed how focusing less on themselves and more on others causes them to feel less stress. As one participant described,

> Actively listening to someone and understanding where they’re coming from, and understanding who they are makes you much, much less likely to go off on them or to get into a situation that's stressful with that individual. (Participant #924, Personal Communication, December, 2015).

This study’s finding related to the role that empathy plays in one’s ability to deal with stress is consistent with the literature, which says that empathy builds on one’s
ability to productively manage emotions (Goleman et al., 2013). Empathy is not about stifling emotions but rather appropriately expressing them. Appropriate expression of emotions allows leaders to recognize and meet the needs of others, which in turn makes them appear more approachable to others and helps them de-escalate tensions when faced with a stressor.

**Teamwork.** The thematic analysis showed a strong presence of the sub-theme *stays connected to others*, which is similar to the ESCI competency of *teamwork*. The two are similar in that they both have to do with collaborating with others to achieve goals. Key components of both definitions include offering support to others, encouraging cooperation, and soliciting others’ input. There is a strong degree of alignment between the sub-theme of *stays connected to others* (91%) and the ESCI code of *teamwork* (86%). Participants spoke of staying connected to trusted work colleagues as a means to help them work through challenges. Doing so, they say, helps them feel less isolated and provides them with valuable advice and input to help them deal with stress.

I think it's very important you have a group of people who work for you. I have five chairs who work full-time for me. I use them as a sounding board. I don't have all the answers, I just don't, and I really try to use them as a sounding board for measuring what should be done and the tone and the nuance of the words. (Participant #908, Personal Communication, February, 2016)

**Conflict management.** The ESCI coding of data showed a strong presence of the *conflict management* competency, with 89% of all participants reporting conflict management behaviors that contribute to their ability to deal with stress. The inductive theme of *surfaces and manages conflict*, which was reported by 66% of all participants, is similar in that both relate to bringing conflict out into the open by talking about disagreements with those involved. These definitions are also alike in that they relate to
de-escalating emotions as a way to resolve conflict. Participants described examples of channeling their anxiety and emotions into problem-solving rather than allowing the situation to bother them. They also spoke of not taking things personally when in a disagreement with a colleague. Doing so, they say, helps them keep their emotions in check and keeps them focused on resolving the disagreement.

I relieve stress by acting rather than ruminating. Do the thing that needs doing. (Participant #934, Personal Communication, January, 2016)

**Summary.** This study found five specific EI competencies that contribute to CMOs’ ability to deal with work-related stress: 1) emotional self-awareness, 2) empathy, 3) emotional self-control, 4) teamwork, and 5) conflict management. In this section, I described the similarities of the thematic analysis definitions with the ESCI competency definitions to demonstrate that my interpretation of the inductive and deductive results support the relationship and degree of alignment between to two coding approaches. Therefore, this finding is supported by evidence from the thematic analysis as well as from the ESCI coding of data. Furthermore, analyzing these two data sets together provides additional supporting evidence for this finding.

**Finding #2: CMOs are experiencing high levels of stress but it is not leading to burnout.** The results from this study indicate several important findings related to the degree of stress experienced by CMOs, whether it is leading to burnout, and whether it is impacting their wellbeing and leadership effectiveness. These findings answer research question #1, *Do Chief Medical Officers perceive that work-related stress impacts their wellbeing and/or leadership effectiveness? If so, how?*, and research question #2, *Do Chief Medical Officers perceive that emotional exhaustion, cynicism, and/or diminished*
professional efficacy impact their leadership effectiveness? In the following paragraphs, I provide a brief summary of the results related to each research question. I then provide my interpretation of these results.

Research question #1: Do Chief Medical Officers perceive that work-related stress impacts their wellbeing and/or leadership effectiveness? If so, how? This study found that CMOs perceive that work-related stress has moderate short-term effects on their emotional and physical wellbeing. Additionally, this study found that although CMOs do not believe that work-related stress impacts their leadership effectiveness, they do perceive that their response during and after a stressful experience does impact their leadership effectiveness. Each of these is described in further detail below.

Impact of stress on wellbeing. As discussed in Chapter 4, 91% of all participants reported that work-related stress has or is currently impacting their emotional and physical wellbeing. Regarding emotional wellbeing, participants described positive impacts when they described situations in which they felt that they had successfully dealt with a stressful situation. They spoke of “feeling good” and “viewing it as a positive experience” after responding effectively to a stressor, and they described how it increased their self-efficacy to manage similar stressors in the future (Participant #935, Personal Communication, January, 2016). In contrast, they described feelings of anxiety, regret, and angst when they discussed situations in which they felt that they did not successfully deal with a stressful situation. Regarding physical wellbeing, the majority of participants described short-term negative effects of stress, noting sleep deprivation, weight gain, and increased blood pressure as the most common physical side effects of stress. They did not discuss long-term physical side effects of work-related stress.
In the majority of reports, participants described the impact of stress on their emotional and physical wellbeing as primarily short term and discussed being able to quickly and effectively recover after putting the stressful experience behind them. As one participant said, “It's pretty rare that I'll go home or have prolonged angst over anything. Time to move on so it doesn't create angst and I don't lose sleep over it” (Participant #931, Personal Communication, November, 2015). This ability to “bounce back,” as participants described, provides evidence of their psychological resiliency, which is characterized by the ability to bounce back from negative emotional experiences (Lazarus, 1993). I attribute this, in part, to the role that EI plays in contributing to their ability to deal with stress (as discussed in finding #1). This finding is supported by researchers who believe that EI plays a significant role in the lives of psychologically resilient people. Specifically, researchers say that one distinguishing factor between low-and high-resilient people is their capacity to learn from life’s setbacks and to use this knowledge to cope more effectively (Salovey, Bedell, Detweiler, & Mayer, 1999). Additional supporting evidence of participants’ psychological resiliency is found in the inductive theme of learning mindset. Within this theme, 89% of all participants reported examples of adapting and applying lessons learned over time. Moreover, they say the ability to bounce back and adapt contributes to strengthening their self-efficacy, because they see themselves as able to learn their way through challenging situations. These findings, taken together, provide evidence that helps explain why negative impacts to participants’ wellbeing are generally short-term.

*Impact of stress on leadership effectiveness.* As it relates to leadership effectiveness, this study found that CMOs do not perceive that work-related stress
impacts their leadership effectiveness. They do, however, perceive that it is their response during and after the stressful experience that has the greatest impact on their leadership effectiveness. Participants discussed examples in which they did not deal well with a stressful situation and the negative implications it had on their leadership effectiveness. Similarly, they discussed examples in which they effectively dealt with a stressful situation and the positive implications it had on their leadership effectiveness.

Regarding circumstances in which participants did not deal well with a stressful situation, they provided examples of not controlling their emotions and behaviors when feeling stress. They spoke of taking things personally, muting emotions, losing engagement, lashing out at others, and avoiding conflict as a few ways in which they did not deal well with stress. They further described how these actions adversely impacted their credibility and ability to influence and lead others.

It definitely diminishes it, no question. Because then, you can't run from your voice, and a CMO relies heavily on their voice. At executive levels, voice means a huge amount for people to hear what you have to say. (Participant #922, Personal Communication, January, 2016)

Regarding circumstances in which participants did deal well with a stressful situation, they provided examples of making balanced and fair decisions, refraining from casting judgments, not taking things personally and remaining calm when in conflict with someone. These examples are hallmark behaviors of emotionally intelligent individuals. Participants also discussed ways in which their leadership effectiveness improved as a result of their positive response to a stressful situation. They further described how these actions positively impacted their credibility and ability to influence and lead others.

I know it raised my credibility with both the board, my CEO and the CFO. (Participant #931, Personal Communication, November, 2015)
This study found that CMOs perceive a positive relationship between their response under stress and his or her leadership effectiveness. Specifically, ample evidence from this study shows that responses driven by emotionally intelligent behaviors contribute to enhancing CMO’s leadership effectiveness. These responses include behaviors such as de-escalating emotions during conflict, resolving conflict by openly talking about disagreements, and understanding and acknowledging others’ perspectives in a disagreement. The impact on their leadership effectiveness is evidenced by positive feedback provided by others observing their behavior and by their ability to garner trust and support needed to mobilize others to adopt organizational changes. Evidence from this study also shows that responses failing to engage emotionally intelligent behaviors are found to limit or impede CMOs’ leadership effectiveness. These responses include behaviors such as not listening to others or seeking to understand their perspective, losing composure under stress, and not cooperating with others. These findings are consistent with an abundance of literature that discusses the relationship between emotionally intelligent behaviors and one’s leadership effectiveness (Boyatzis & McKee, 2005; Goleman, et al., 2013).

**Research question #2: Do Chief Medical Officers perceive that emotional exhaustion, cynicism, and/or diminished professional efficacy impact their leadership effectiveness?** This study found that CMOs are experiencing high levels of stress but it is not leading to burnout. The average participant reported their current stress level as severe, and 69% of all participants reported a current perceived level of stress of 5 or higher, which translates to severe, very severe, or worst possible. Reports of emotional
exhaustion and cynicism showed low means of 10.3 and 6.4, respectively, out of a possible 30, and reports of professional efficacy showed a high mean of 30.6 out of a possible 36. According to burnout researchers, these results indicate a low level of burnout in the study population. According to Maslach et al., (1997), burnout is conceptualized as a continuous variable, ranging from low to moderate to high degrees of experienced feeling. It is not viewed as a dichotomous variable that is either present or absent. A high degree of burnout is reflected in high scores on the emotional exhaustion and cynicism subscales and in low scores on the professional efficacy subscale. Average scores on all three subscales is characterized as an average degree of burnout, and a low degree of burnout is reflected in low scores on the emotional exhaustion and cynicism subscales and in high scores on the professional efficacy subscale. In this section, I discuss my interpretation of the relationship between these variables and whether CMOs perceive if the three dimensions of burnout—emotional exhaustion, cynicism, and professional efficacy—have an impact on their leadership effectiveness.

**Impact of emotional exhaustion on leadership effectiveness.** This study found that the majority of participants appear to have limited experiences with emotional exhaustion, with 80% of the group reporting experiencing signs of emotional exhaustion no more frequently than once a month. This finding is consistent with the results of the interview data, which showed that the vast majority of CMOs did not discuss feelings of emotional exhaustion, nor did they discuss it having an impact on their leadership effectiveness. This study did, however, find some limited evidence of emotional exhaustion adversely impacting a small number of participants. Of the group, five individuals reported experiencing signs of emotional exhaustion once a week or more. In
their interviews, these individuals did discuss feelings of emotional exhaustion and spoke of how it limits their leadership effectiveness.

It just leaves me emotionally depleted; I'm just kind of used up. (Participant #933, Personal Communication, December, 2015)

Actually, if there is anything that can potentially burn me out, it's where the physicians...you're not able to bring them along. Usually, it manifests in either a communication style that is, on hindsight, I say "I wish I had not done that," or it is a decision that was rash and quick and reactive. In those situations, my stress and my distress is usually manifested in a form that is not as professional as I would like it to be. (Participant #915, Personal Communication, January, 2016)

Impact of cynicism on leadership effectiveness. Similar to emotional exhaustion, this study found that the majority of participants appear to have limited experiences with cynicism, with 80% of the group reporting experiencing signs of cynicism no more frequently than once a month. This finding is consistent with the results of the interview data, which showed that the vast majority of CMOs did not discuss feelings of cynicism, nor did they discuss it having an impact on their leadership effectiveness. Only one individual, who had a reported stress level of worst possible, reported experiencing signs of cynicism once a week or more. In the interview, this individual did not discuss examples of being cynical, nor did the individual discuss a relationship between cynicism and leadership effectiveness.

Impact of diminished professional efficacy on leadership effectiveness. This study found that CMOs are quite confident in their self-reported professional efficacy, as seen with a mean efficacy of 30.6 on a scale of 36 and a very small SD of 2.0. For additional context, 69% of all participants reported strong feelings of professional efficacy a few times a week or more. The topic of self-efficacy appeared as a strong theme throughout the interviews as well. Taken together, these results provide evidence that self-efficacy
plays an important role in the stress appraisal and coping processes. Due to the strength of this evidence, I discuss this finding in greater detail under finding #3 below.

**Summary.** The evidence presented in the previous sections provides support for several findings related to the degree of stress experienced by CMOs, whether it is leading to burnout, and whether it is impacting their wellbeing and leadership effectiveness. These findings answer research question #1, *Do Chief Medical Officers perceive that work-related stress impacts their wellbeing and/or leadership effectiveness?* If so, how?, and research question #2, *Do Chief Medical Officers perceive that emotional exhaustion, cynicism, and/or diminished professional efficacy impact their leadership effectiveness?* Specifically, this study found that CMOs are experiencing high levels of stress, but it is not leading to burnout. This study also found that CMOs perceive that work-related stress has moderate short-term effects on their emotional and physical wellbeing. Finally, this study found that, although CMOs do not believe that work-related stress impacts their leadership effectiveness, they do perceive that their response during and after a stressful experience does impact their leadership effectiveness.

**Finding #3:** Self-efficacy serves as an effective personal resource that contributes to CMOs’ ability to deal with work-related stress and prevent burnout. Given the strong evidence emerging from this study related to self-efficacy, the study’s third finding goes beyond the research questions to explore the role that self-efficacy plays in one’s ability to deal with work-related stress. For the purpose of this research, perceived self-efficacy is defined as people’s beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives (Bandura, 1994). Self-efficacy is an important motivational construct that influences
individual choices, goals, emotional reactions, effort, coping and persistence. Self-efficacy also changes over time as a result of learning, experience, and feedback (Gist & Mitchell, 1992).

This study found that self-efficacy serves as an effective personal resource that contributes to one’s ability to cope with stress and prevent burnout. Specifically, self-efficacy serves as a mediator in the stress appraisal process and also serves to enhance one’s coping abilities. I describe both functions in greater detail below and provide evidence from this study to support this finding.

**The role of self-efficacy in the stress appraisal process.** This study found that self-efficacy serves as a mediator in the stress appraisal process. This finding is based on the cognitive relational theory of stress, emotions, and coping, which says that cognitive appraisals are seen as mediating processes that refer to the stakes a person has in a stressful encounter and to the coping options (Schwarzer, 2014). Therefore, it is first necessary to describe briefly some aspects of this theory that are relevant for the understanding of this finding.

Cognitive relational theory defines stress as “a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her wellbeing” (Lazarus & Folkman, 1984, p.19). Appraisals are determined by concurrently perceiving environmental demands and personal resources, and can change over time due to coping effectiveness, altered requirements, or improvements to personal abilities (Schwarzer, 2014). There are two component processes in cognitive appraisals—primary appraisals and secondary appraisals.
Primary appraisal refers to the stakes a person has in a certain encounter. In primary appraisals, a situation is perceived as being either irrelevant, benign-positive, or stressful. Stressful events are further subdivided into the categories of challenge, threat, and harm/loss. Secondary appraisals refer to one’s perceived personal resources to cope with the demands at hand. Primary and secondary appraisals depend on each other and often appear at the same time. Some researchers suggest that the terms “demand appraisal” and “resource appraisal” may be a more appropriate reflection of these two processes (Schwarzer, 2014). This is consistent with Hobfoll’s (1988) expansion of the stress and coping theory with respect to the conservation of resources as the main human motive in the struggle with stressful encounters. It is also consistent with the Job Demands-Resources Model, which says that stress occurs when an appraisal finds that demands exceed the available resources an individual has to deal with those demands (Bakker & Demerouti, 2007). In other words, stress appraisals result from perceived situational demands in relation to perceived personal coping resources.

With respect to personal coping resources, researchers say that self-efficacy is a personal resource, or vulnerability factor, in the stress appraisal process (Bandura, 1994). People who generally trust in their own capabilities to master various environmental demands also tend to perceive difficult achievement tasks as more challenging than threatening. A generalized belief of a positive self-efficacy in this sense serves as a resource factor buffering one against distress experiences, furthering “eustress” perceptions instead. In contrast, previous research on anxiety and self-related conditions has demonstrated that generalized beliefs of weak self-efficacy make individuals vulnerable toward distress experiences (Schwarzer, 2013). These assumptions apply to
the prediction of appraisal patterns over time rather than to the absolute level of each distinct stress appraisal (Schwarzer, 2014).

This study found that self-efficacy serves as an effective personal resource for CMOs in the stress appraisal process. Support for this finding is evidenced by the results of the quantitative and qualitative analyses. I discuss this evidence in the following paragraphs.

As previously discussed, study participants are considered to be highly efficacious, as evidenced by their professional efficacy measure on the Maslach Burnout Inventory (MBI), with a mean score of 30.6 on a scale of 36, a very small SD of 2.0, and 69% of all participants reporting strong feelings of professional efficacy a few times a week or more. The moderately weak negative relationship between the stress variable and the professional efficacy variable at –0.440 indicates that the stress score decreases as the professional efficacy score increases, and vice versa. This shows that professional efficacy is serving as a resource in CMOs’ perceptions of their current level of stress.

Further evidence from the thematic analysis shows that 66% of study participants report self-efficacy as a factor in their appraisal of a situational stressor. Most participants spoke of feelings of efficacy as a mediator in their stress appraisal process, describing it as a “desensitization process” (Participant #906, Personal Communication, February, 2016). As Participant #931 described,

I've done this long enough and done a number of different roles that I now view it differently. If you had asked me this maybe 10, 15 years ago, I probably would've had a different answer but now, these are really just opportunities and challenges and you just have to work through them. (Participant #931, Personal Communication, November, 2015)
In contrast, other participants provided examples indicating that a lack of self-efficacy causes them to appraise situational demands as exceeding their available resources.

Compared to surgery, I felt like I did a lot of things well. This job, I have had a very difficult time dealing with my feelings towards what I'm working on, and if I'm really moving the ball, getting to where I need to be, or doing something well. And that causes stress for me. (Participant #917, Personal Communication, November, 2015)

Taken together, the results from the quantitative analysis and qualitative analysis show that self-efficacy serves as a mediator in the stress appraisal process. When self-efficacy is high, it acts as a buffer against distress experiences, whereas generalized beliefs of weak self-efficacy create vulnerability in distress experiences.

*The role of self-efficacy in the coping process.* This study found that a strong sense of self-efficacy contributes to one’s ability to cope with stress and prevent burnout. This finding is supported by the quantitative and qualitative results. I discuss each of these in the following section.

The quantitative results of this study show strong negative relationships between professional efficacy and the other two dimensions of burnout (emotional exhaustion and cynicism). As reported in Chapter 4, professional efficacy has a significant negative relationship with cynicism at –0.505 and with emotional exhaustion at –0.607. These relationships are consistent with the burnout literature, which says that emotional exhaustion and cynicism typically have positive relationships with each other, and both have negative relationships with professional efficacy.

The thematic analysis results also lend support to this finding. The sub-theme *adapts and applies lessons learned* provides examples of how CMOs’ ability to learn from previous experiences enables them to deal with the stress of equally challenging
situations. They described learning experiences as having a positive impact on their self-efficacy and ability to cope with other stressors. They also spoke of becoming more comfortable in their own skin as they learn how to adapt to different situations and environments.

But now, I probably have two very difficult conversations a week like this with physicians. I think I've gotten better at not worrying about them. I just decide what I'm gonna do. (Participant #919, Personal Communication, January, 2016)

The aforementioned evidence of self-efficacy development is supported by the literature, which says that there are four major sources of self-efficacy development: 1) mastery experience, 2) physiological arousal, 3) social models, and 4) verbal persuasion (Bandura, 1994). First, mastery experience is said to be the best way to develop self-efficacy. Achieving success with a difficult task can increase belief in individual self-efficacy, but failures do the opposite. Second, when individuals are affected physiologically, their stress levels go down and their negative emotional tendencies can be reduced. It is the perception of these emotional and physical reactions that are important rather than how strong they are. Third, in social modeling, individuals observe others who are like themselves. Vicarious observation of others over time increases an individual’s belief in their ability to master comparable activities to succeed. Finally, individuals can be persuaded by others to believe that they can achieve mastery. In the process, individuals tend to exert great effort and maintain such effort rather than doubting themselves in the face of obstacles.

Self-efficacy development viewed in conjunction with adaptability may be inherently related to one’s ability to deal with stress. When individuals are successful at
dealing with a stressful experience, it strengthens their self-efficacy, which builds resiliency and leads to an even greater ability to deal with stress.

**Summary.** When viewed together, these results provide evidence of the contribution self-efficacy makes to one’s ability to cope with stress and avoid burnout. This study found that the high rate of self-efficacy reported by CMOs serves as a mediator in the stress appraisal process. Generalized beliefs of high self-efficacy create a buffer against distress experiences, whereas weak self-efficacy creates vulnerability in distress experiences. This study also found that a strong sense of self-efficacy contributes to CMOs’ ability to cope with stress and prevent burnout.

**Implications for Future Research**

While this study provides useful conclusions that contribute to the bodies of knowledge related to burnout, coping, and EI, there are several important implications for future research: 1) future studies should put EI at the forefront of coping research, 2) future studies should focus on other types of physician leaders, 3) future research should use more robust data collection techniques, 4) a larger study of CMOs should be conducted using more robust statistical analyses, and 5) future studies warrant a more robust measure of self-efficacy. Each of these opportunities for future research is discussed in the following paragraphs.

First, the literature review revealed a limited number of studies examining the relationship between EI and one’s ability to deal with work-related stress. The few examples I did find were focused on human services professions—counselors, social workers, nurses, and teachers—and I did not find any studies specifically exploring this topic for physicians or physician leaders. This study found evidence of EI competencies
that facilitate successful coping through a number of distinct processes: they 1) enable productive resolution of interpersonal conflict, 2) prompt emotional insight and understanding, and 3) often lead to increased use of social support. Understanding these and other ways in which EI may contribute to one’s ability to deal with stress requires more research focused directly on examining the relationship between EI and coping. The paucity of useful research regarding the relationship between EI and stress clearly invites greater attention, and future studies should put EI at the forefront of coping research.

Second, based on my review of the literature, this study appears to be the first of its kind focused on how physician leaders use EI competencies to maintain their leadership effectiveness while faced with high degrees of stress. Although this study focused specifically on CMOs, the findings indicate that there may be similar implications for other types of physician leaders. For example, in my professional experience, I have observed that individuals in department chair and medical director roles encounter high degrees of stress, yet there appear to be no studies on these types of physician leaders. Given the importance of these roles, future studies should focus on understanding the sources and severity of stress faced by department chairs and medical directors and should seek to understand whether the findings from this study apply to them as well.

Third, the primary method of data collection for my study was a 1-hour interview with each participant. As such, the data analysis was dependent on the accuracy of self-reported information. Future research on this topic should consider using more robust data collection techniques such as 360 interviews (also known as multi-rater), which solicit information about an individual’s work-related behavior and performance via input
from a variety of workplace sources. This approach may contribute valuable evidence that supports and/or goes beyond the findings of this study by including an evaluation of peer, supervisor, and subordinate perceptions. This multi-rater view will provide additional perspectives to researchers as they seek to examine the relationship between EI and one’s ability to maintain their leadership effectiveness while successfully dealing with work-related stress.

Fourth, as described in Chapter 3, the inclusion criteria to participate in this study were: 1) the participant’s role and size of organization with which they work; and 2) my ability to access the participant. Regarding role and size of organization, I selected participants who met the following demographics: 1) physician leaders who serve in full-time CMO roles, 2) CMOs who work for hospitals with $100M+ net patient revenue, 3) CMOs who are 40 years old or older, and 4) individuals who have been in their CMO role for 12+ months. I did not pre-screen individuals based on their leadership effectiveness, emotional intelligence, or any other criteria. As such, I did not exclude participants based on any factors unrelated to the inclusion criteria mentioned above. The findings from this study add to our understanding of what causes stress for CMOs and how they maintain their leadership effectiveness despite the stress they encounter, but it cannot be inferred that this group of participants is representative of the broader CMO population. For example, the CMO role is not universal, in that they are not all exposed to the same sources and degrees of stress. Similarly, individuals are not all afforded the same organizational resources to deal with stress. For these reasons, a larger study with more robust statistical analyses is needed to understand whether the findings from this study are generalizable to the broader CMO population.
Finally, due to the strength of the evidence related to self-efficacy found in this study, future studies warrant a more robust measure of self-efficacy to better understand how it contributes to one’s ability to deal with stress. The measure used to assess self-efficacy for this study was based on a limited number of questions on the Maslach Burnout Inventory. Although this method was appropriate to answer the study’s research questions, future research should consider other methods for assessing self-efficacy in the work domain, such as the Self-Efficacy Scale (Sherer et al., 1982), and its relationship to one’s ability to cope with stress. If a customized self-efficacy measure is preferred by researchers, it is recommended that the measure conform to Bandura’s guidelines for constructing a self-efficacy scale (Bandura, 2006).

Additional studies focused on the aforementioned topics will contribute to our understanding of how EI and self-efficacy contribute to one’s ability to deal with stress within and beyond the CMO role. By adding to the body of knowledge, practitioners can develop interventions to help physician leaders prevent stress and also help them maintain their leadership effectiveness when they do experience stress. As a result, research will then be needed to assess whether specific types of interventions do, in fact, foster effective coping.

Implications for Practice

The findings from this study offer several important implications for practitioners:

1) hospital executives should seek to understand CMO’s severity of stress and sources of stress, 2) hospital executives should put EI development at the forefront of their physician leadership development programs, 3) hospital executives should provide proper support to CMOs to accelerate the learning process and reduce the level of stress experienced as a
result of transitional factors, and 4) hospital executives should consider EI and self-efficacy in CMO succession planning. Recommendations for each of these implications are discussed in the following paragraphs.

First, hospital executives, including the CEO, Chief Human Resources Officer (CHRO), and Chief Learning Officers (CLO), should seek to understand the severity of stress experienced by the organization’s CMO and the specific factors that contribute to his or her stress. This study found that CMOs are indeed exposed to many stressors in their role. Contributing factors to what they report as severe, very severe, or worst possible stress include external environmental factors, organizational factors, transitional factors, and individual factors. By conducting an in-depth diagnosis of these factors, CHROs and CLOs can develop targeted preventative and interventional stress mitigation strategies to help their CMO and other physician leaders perform at an optimal leadership level. For example, understanding organizational factors may shine light on underlying cultural dynamics, structural issues, and operating problems that contribute to their CMO’s stress, which may aide in the development of strategies that reduce the risk of stress and burnout. Likewise, an understanding of the transitional factors and individual factors that are impacting their CMO’s stress may aide CLOs in the development of learning programs that support them as they move from clinical to leadership roles.

Second, although this study is limited and further research is needed, as discussed, the data suggest that EI competency development should be placed at the forefront of physician leadership development and support plans. The current study suggests clear implications for CMOs, and it may also have relevance for physician leaders at all levels, including practicing physicians who will serve as our next generation of physician
leaders. Organizations should provide proper training and support during a physician’s transition to leadership to accelerate the learning process and reduce the level of stress experienced as a result of transitional factors. In doing so, CLOs should consider emphasizing EI competency development in the design of leadership programs for all levels of physician leaders. Specifically, the findings from this study indicate that physician leadership development programs should focus on developing productive conflict management skills, emotional self-awareness and self-management skills, collaborative teaming skills, and active listening skills. CLOs should consider using methods such as EI assessments, group coaching on social awareness and relationship management, and individual coaching to develop self-awareness and self-management.

There are several reasons for why hospital executives should put EI development at the forefront of their physician leadership development programs. CMOs may develop behavioral habits as physicians that don’t serve them well in leadership roles. However, because physicians are primarily focused on clinical responsibilities, their careers may interfere with their ability to seek formal EI development opportunities. Additionally, many CMOs who participated in this study described the development of their EI competencies as occurring over time, mostly through informal learning experiences. Many of them stated that they believe the learning process and the improvement in their abilities would likely have been accelerated through more formal learning interventions. Furthermore, several study participants who have completed formal EI development training attribute their ability to maintain their leadership effectiveness under stress to these formal programs. Specifically, they spoke of executive coaching as being an
extremely effective method that enables their ability to reflect on how they are processing and responding to emotionally charged information and situations.

Third, CHROs and CLOs should partner with new CMOs to develop and implement support plans that include frequent informal and formal supportive feedback from the CEO and other executive-level peers. Research shows that the development of self-efficacy may be impeded when individuals experience a lack of supportive feedback, further leading to the development of a tendency to appraise demands as threatening and cope with problems in a maladaptive way (Schwarzer, 2014). This study found that CMOs typically don’t receive adequate supportive feedback in their executive level leadership roles. As one participant described,

In practice, feedback is like heroin. You get feedback every day. And I did. And this is very little positive feedback. Very, very, little. Certainly not from the CEO and certainly not from a lot of doctors. So that's a stressor. If you think you need positive feedback to keep you going, this is not the job. (Participant #907, Personal Communication, February, 2016)

In the absence of feedback, many of them look to others for advice and role modeling as a method for gaining confidence in their abilities. Others spoke of being self-reflective after a stressful encounter in an attempt to learn from the situation. Although these methods may provide some benefit, they should not be a replacement for more formal support structures such as leadership development and executive coaching. Indeed, several of this study’s participants commented on the value they have received as a result of formal leadership development and/or executive coaching.

I've had a coach for a long time. And in fact, I think if I hadn't had the coach, I would not have left practice. But there's the point where you really need a perspective about your career and what makes you valuable in the organization. It's typically you can't see that 20/20. You can't. And so you need an advisor, just
like somebody advising a nationally ranked tennis player. (Participant #908, Personal Communication, February, 2016)

This study provides several important insights with which to consider recommendations for understanding and addressing transitional and individual factors that contribute to CMOs’ stress. Transitional and individual factors causing stress primarily stem from having to learn new skills and apply those skills in a less familiar leadership environment. In 2011, the American Hospital Association (AHA) published results that described the skills needed by physician leaders in the midst of healthcare reform, including skills such as working in teams, empathy, conflict management, and EI (Combes & Arespacochaga, 2012). However, these skills are often not included in medical training. Findings from my study also indicate that some CMOs develop behavioral habits as physicians that don’t serve them well in leadership roles. As one participant said, “We were trained to be experts in islands” (Participant #931, Personal Communication, November, 2015). In light of these research findings, physicians may need to learn and apply new skills that place less emphasis on autonomy and independence and more emphasis on collaborative, team-based leadership. For some, this learning curve may take years of unlearning old behaviors while working toward the adoption of new behaviors.

Fourth, the findings from this study may also have implications for succession planning. Organizations should carefully consider selecting physician leaders who have demonstrated self-awareness, emotional self-management, empathy, conflict management, and teamwork EI competencies, to name a few. Additionally, given the strength of the relationship between self-efficacy and one’s ability to deal with stress,
organizations should also consider including a self-efficacy assessment in their hiring practices. Not only will these measures help identify individuals who are the best fit for high-pressured leadership roles, they will also provide a benchmark with which to design customized interventions that will best support individuals who transition into these roles.

**Conclusion**

The purpose of this study was to gain insight into if, and how, Chief Medical Officers experience work-related stress and burnout, and if possession of certain emotional intelligence (EI) competencies contributes to their ability to deal with work-related stress. The research methods employed for this study utilized qualitative and quantitative techniques. Qualitative data was collected via semi-structured interviews with 35 CMOs, and quantitative data was collected using the Maslach Burnout Inventory (MBI) instrument. The study was designed to collect data to answer the following research questions:

**Question One:** Do Chief Medical Officers perceive that work-related stress impacts their wellbeing and/or leadership effectiveness? If so, how?

**Question Two:** Do Chief Medical Officers perceive that emotional exhaustion, cynicism, and/or diminished professional efficacy impact their leadership effectiveness?

**Question Three:** Do Chief Medical Officers perceive that emotional intelligence competencies contribute to their ability to deal with work-related stress? If so, how?

The study’s results led to three findings. First, EI competencies serve as an effective personal resource that contribute to a CMOs’ ability to deal with work-related
stress and prevent burnout. Second, CMOs are experiencing high levels of stress, but it is not leading to burnout. Third, self-efficacy serves as an effective personal resource that contributes to a CMOs’ ability to deal with work-related stress and prevent burnout. The study’s findings have important implications for future research as well as for practice. Regarding future research, further investigations into the relationship between EI and stress, particularly in the context of physician leadership, are expected to both validate and enrich this study’s findings. Similar investigations should focus on the relationship between self-efficacy and stress, again in the context of physician leadership. Regarding practice, organizations should consider providing support such as formal leadership development and/or executive coaching during one’s transition into the CMO role to accelerate their development of necessary EI competencies and strengthen their self-efficacy. Moreover, organizations should ensure they are selecting physician leaders who have a strong sense of self-efficacy and have demonstrated EI competencies such as self-awareness, emotional self-management, empathy, conflict management, and teamwork. Finally, by including formal EI development into medical school curriculums, we can better prepare our next generation of physician leaders to be successful.
Appendix A: Interview Protocol

General Introduction
1. Dr. X, I’m interested in work-related stress and how it impacts wellbeing and leadership effectiveness. You have all the information you need from the Study Information Sheet. Do you have any questions?

2. Would you mind if I record this interview? I’ll keep all data collected from this interview and survey responses anonymous, and I will only use general themes in my report findings. *(turn on recorder)*

3. Do you mind reconfirming your willingness to participate in this study?

4. This study consists of two parts. Today I’ll be interviewing you, and at the end of our discussion we’ll talk about the online survey. Let me take a moment to tell you about the interview format.

5. Our discussion should last approximately 60 minutes. I have some questions to get us started, but we do not have to stay within these questions. We will keep our conversation pretty open-ended. Is that ok for you?

6. Do you have any other questions for me before we get started?

Opening
1. Dr. X, please tell me a little about yourself. How did you come to be a physician leader? How did you come to be the CMO of your organization?

2. I am interested in understanding CMO’s experiences with the demands and pressures they constantly encounter. I’m really looking forward to hearing about your thoughts, feelings, and ideas about stress at work.

3. I’m going to ask you some specific questions, but first give me an overview of the kinds of pressures and stress you face in your role. What types of things trigger stress for you at work?

4. What are some ways in which you effectively deal with the stress in your role?
**Behavioral Event Interview (BEI) Questions**

1. Tell me about a particular time when you dealt really well with a stressful experience.
   a. First, what was the situation? What did you do? What were you thinking? What were you feeling?
   b. How did this experience affect your overall wellbeing?
   c. How did this experience impact your leadership effectiveness?
   d. What did you learn?

2. Tell me about a particular time when you didn’t deal well with a stressful experience.
   a. First, what was the situation? What did you do? What were you thinking? What were you feeling?
   b. How did this experience affect your overall wellbeing?
   c. How did this experience impact your leadership effectiveness?
   d. What did you learn?

3. I want to flip now to understanding how you handle the demands and pressures of your role. I want to learn what works for you. Tell me once again, what helps you to deal with the everyday stress and pressure at work?

4. There are a number of skills we believe impacts one’s ability to deal with stress. Things like self-awareness, managing one’s own emotions, the way we view or assess stressful events, staying connected with other people. Can you tell me what skills you use?

5. How do these things impact your wellbeing? How do they impact your leadership effectiveness?

6. Tell me once again the 1 or 2 things that you do that really help.

7. Is there anything else you would like to share with me, perhaps something I did not think to ask?

**Closing**

1. That concludes the question part of the interview. As a reminder, participation in this study also includes completion of a brief online survey. After we end our interview, I will send you an email with a link to the survey. In the “participant identification” field, please enter your unique ID, which is (PID#). This will ensure that your responses remain anonymous.
2. If your schedule allows, please complete the survey within 10 business days.

3. Again, thank you for participating in this study. It was a pleasure meeting you and I appreciate your willingness to open up to me today.
Appendix B: Additional Quotes in Support of ESCI Codes

Self-Awareness

The following quotations are representative examples of the ESCI behavioral indicator “able to describe how own feelings affect own actions”.

So I think one is to kind of have some awareness that you're under some stress. Two is for me to realize what that tends to do to me. And I think that one of the things it does to me is that I'm not as effective communicator one-on-one or interpersonally when I get overly stressed. (Participant #909, Personal Communication, February, 2016)

So I think primarily it starts with an awareness of yourself and allowing yourself to take care of yourself and not feel like you're cheating somebody else because you've done that. The wellness and resilience part I think is huge. (Participant #926, Personal Communication, December, 2015)

The following quotations are representative examples of the ESCI behavioral indicator “describes underlying reasons for own feelings”.

I get more upset when I feel like I've let someone down, or someone in my organization is struggling or is unhappy or might be leaving, and is there something I could have done differently. (Participant #910, year)

So there's a lot on my plate. And that gets a little stressful at times because you get into some complex prioritizing. (Participant #924, Personal Communication, December, 2015)

I have a disruptive relationship with colleagues at the leadership level. That would probably be the greatest stress. (Participant #906, Personal Communication, February, 2016)

Part of it, actually probably what is a large part of the stress I didn't talk about is the constancy of it, feeling 365, 24/7 that I need to be available even on vacations and everything. (Participant #916, Personal Communication, January, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “aware of the connection between what is happening and own feelings”.

So when I am doing what's right to the patient, my stress level goes down. (Participant #923, Personal Communication, January, 2016)
And I can tell you that there's nothing more stressful than sitting in ICU trying to keep someone alive either before or after a transplant, in the moment. (Participant #927, Personal Communication, December, 2015)

The following quotations are representative examples of the ESCI behavioral indicator “shows awareness of own feelings”.

Well, when there's stress at work, I do recognize it. I know when I'm feeling stressed about something, and I think that's a start. (Participant #918, Personal Communication, December, 2015)

…it made me be more aware that when I felt frustrated or when I could hear myself getting that way…(Participant #917, Personal Communication, November, 2015)

The following quotations are representative examples of the ESCI behavioral indicator “acknowledges own strengths and weaknesses”.

I have had a very difficult time dealing with my feelings towards what I'm working on, and if I'm really moving the ball, getting to where I need to be, or doing something well. (Participant #917, Personal Communication, November, 2015)

I struggle with that whole boundary issue in general. (Participant #904, Personal Communication, February, 2016)

So what I would tell you I do now is I recognize that if I am not whole, physically, emotionally, spiritually, and intellectually then my ability to be optimally resilient as well as optimally productive is at risk. (Participant #926, Personal Communication, December, 2015)

**Self-Management**

**Achievement Orientation**

The following quotations are representative examples of the ESCI behavioral indicator “strives to improve own performance”.

Well, one of the things that is important to me is that I assess my performance in the moment, and I do believe I'm getting better at this. (Participant #908, Personal Communication, February, 2016)
I learned to watch myself. To say that just because it's something I don't want to deal with, it's still my responsibility. And also not to assume that things are taken care of because they've passed on to someone else. It hasn't made me hyper-vigilant in any means, but it also says to check myself. (Participant #902, Personal Communication, January, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “seeks ways to do things better”.

I've always been interested in what's new, I've always been interested in building programs, starting programs. (Participant #903, Personal Communication, February, 2016)

I do want to be part of change. (Participant #902, Personal Communication, January, 2016)

Adaptability

The following quotations are representative examples of the ESCI behavioral indicator “adapts by smoothly juggling multiple demands”.

It turns out that, at my level, I felt I was particularly successful in organizing and coming up with a workable plan despite all the different distractions from above and below. (Participant #911, Personal Communication, January, 2016)

I was head of quality and safety. I've overseen the Department of Pharmacy, but as needs arise in discussion with leadership, certain things are given up and other things are taken off. So I would say that what would be unique here is the changing portfolio. (Participant #906, Personal Communication, February, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “adapts overall strategy, goals, or projects to fit the situation”.

It taught me to use opportunities to learn and grow other approaches. So one of the things that I think I am better at now then maybe when I started this is to understand that there are situations where you know what the right answer is and you can't just tell people this is the right answer this is what we're going to do, and get away with it. (Participant #926, Personal Communication, December, 2015)
**Emotional Self-Control**

The following quotations are representative examples of the ESCI behavioral indicator “gets impatient or shows frustration inappropriately”.

And I looked at him and I said, "You know, they do pay me a lot of money," I said with my heart rate down, I said, "to deal with assholes like you." (Participant #923, Personal Communication, January, 2016)

And finally I couldn't take it anymore and I just said to this guy, to this man, and I said, "That is just not true." But I did it in an angry fashion, which was visual. It actually shut him down. It shut him right up, as expected. (Participant #932, Personal Communication, January, 2016)

And I basically said to this physician, "Dr. X, there're 500 physicians in this medical staff who seem to be able to manage this medical records system and get their work done. And you can't, for whatever reason." (Participant #934, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “acts appropriately even in emotionally charged situations”.

I had my integrity challenged on a number of occasions, but I stayed true to my integrity and was truthful and honest during the whole process. (Participant #911, Personal Communication, January, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “remains calm in stressful situations”.

I go from the fretting stage into the "I'm just gonna get it done, knock this out, move on." As long as I have a deliberate way ahead, that seems to help my stress quite a bit. (Participant #911, Personal Communication, January, 2016)

… don't get your blood pressure up, don't get your heart rate up. Just stay calm. So that's all I did. (Participant #923, Personal Communication, January, 2016)

One is to say, regardless of if it's stressful, if you already have the vision and the mission and you keep that to the forefront, in this case, almost always it's either going to be patient-centered or going to be physician-centered, you know, what you're trying to focus…then you know that you're working towards that purpose. So if there is stress, it's acceptable because there's going to be an outcome that you're trying to get. (Participant #902, Personal Communication, January, 2016)
The following quotations are representative examples of the ESCI behavioral indicator “remains composed, even in trying moments”.

I'm sure your blood pressure goes up and your blood starts to boil. But that was short lived. Very short lived. I just walked away. Focused myself, centered myself a little, and then started asking myself how I wanted to react. (Participant #911, Personal Communication, January, 2016)

When I am at my most upset when I'm dealing with somebody, I get tremendously polite. I start sir-ing and ma'am-ing. And part of that is my own control, to make sure I don't cross a line. (Participant #902, Personal Communication, January, 2016)

I think part of it is a lot of cognitive stuff. It's sort of stepping back looking at what's going on and trying not to magnify what it is, understanding what's bringing it on, recognizing that whether rightly or wrongly I don't mind dealing with stress. (Participant #916, Personal Communication, January, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “controls impulses appropriately in situations”.

I decided to just walk away and process it, determine whether it was worth losing my temper or not. (Participant #911, Personal Communication, January, 2016)

"If he hits me, am I going to hit him back?" Because I had spent four grueling years, and am I going to throw away my career? Or am I going to basically stand here and take it? I took it. (Participant #917, Personal Communication, November, 2015)

The following quotation is a representative example of the ESCI behavioral indicator “loses composure when under stress”.

…and I had a screaming fight in the hallway. And that was not professional. Not at all. And I really needed to take it somewhere. We were in a hallway, and it was like, ongoing. (Participant #912, Personal Communication, January, 2016)

Positive Outlook

The following quotation is a representative example of the ESCI behavioral indicator “sees the positive in people, situations, and events more often than the negative”.

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But I prefer to look at the positives. Because to me, if you do that and then realistically, go back to some of the challenges, it's just a better context. (Participant #935, Personal Communication, January, 2016)

Social Awareness

**Empathy**

The following quotations are representative examples of the ESCI behavioral indicator “understands another person’s motivation”.

The key to be a good negotiator is to really be a good listener, and try to say, "What does this person really want?" (Participant #913, Personal Communication, January, 2016)

"Okay now, you've got to stay cool. Okay, don't. They are looking to get a rise out of you, don't do it." (Participant #913, Personal Communication, January, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “understands others by listening attentively”.

And we visited all the other major groups and asked them, "Okay, you didn't rate me very high, that's okay. Give me an idea, what can I do better?" That sort of thing, I began to realize that really burnout correlates more with satisfaction more than anything else. (Participant #913, Personal Communication, January, 2016)

So listening and then trying to decipher what their issues were, and then I would talk to each party and find out what their perspective was. (Participant #935, Personal Communication, January, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “understands others by putting self into others’ shoes”.

I think, to have lived in their [physicians’] shoes when you're trying to negotiate some of these different care models that you need to deploy. (Participant #917, Personal Communication, November, 2015)

I guess I've had a very busy practice and I've been a clinician scientist so I can relate with what many of the docs go through. (Participant #9109, year)

Actively listening to someone and understanding where they're coming from, and understanding who they are makes you much, much less likely to go off on them or to get into a situation that's stressful with that individual or in the context that
that individual is in with you, and having you react in an adverse way. (Participant #924, Personal Communication, December, 2015)

The following quotations are representative examples of the ESCI behavioral indicator “understands others’ perspectives when they are different from own perspective”.

Okay, so I understand where they’re coming from. There is fear. There's a lack of belief that somebody is going to bring value to them and I needed to establish my credibility. (Participant #926, Personal Communication, December, 2015)

My CEO is just a totally different personality, and he's much more forgiving and thinks people will learn from their mistakes, and he'll point them out. (Participant #931, Personal Communication, November, 2015)

Organizational Awareness

The following quotations are representative examples of the ESCI behavioral indicator “understands the values and culture of the team or organization”.

I've learned the hard way that this local culture, the good old boys and girls who've been here forever, hundreds of years, who feel that they have a privilege, that those of us who come from the outside, have to earn over a longer period of time. (Participant #903, Personal Communication, February, 2016)

And I think that's created this incredible culture here. Nothing's perfect, but the culture here is one of stability. And so when you have a civil culture that can firmly disagree on things, but do it in a civil fashion, stress levels will definitely stay down. (Participant #923, Personal Communication, January, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “understands the informal structure in the team or organization”.

I think the other stressor, at least for me, was that our system is very highly organized and well managed by the non-physician administrative staff. (Participant #903, Personal Communication, February, 2016)

Now, the nice thing about [organization] is we're also relatively flat in structure and nimble. A lot of times, something like PPCI or something, we'll say, "Wow, we're going to have to start doing this. This is going to be important to us." And we'll start, pull a small work group together, and start planning it out. (Participant #902, Personal Communication, January, 2016)
The following quotations are representative examples of the ESCI behavioral indicator “understands the informal processes by which work gets done in the team or organization”.

I think what it did was it taught me that I could challenge. That even though on a hierarchical scale, the person who was doing this was above me, I could push back, I could challenge and I could get to where I needed to get and I could state my case. And that while we are a very hierarchical organization, that it will listen. (Participant #916, Personal Communication, January, 2016)

So part of the team composition is a mixture of people that they rely on me to deal with the chairs because they wouldn't deal with the chairs very well because all they want to do is get it done, and it might piss them off. And my job is to massage that and make it work. (Participant #932, Personal Communication, January, 2016)

**Relationship Management**

**Conflict Management**

The following quotations are representative examples of the ESCI behavioral indicator “tries to resolve conflict instead of allowing it to fester”.

And I thought, "You know, the worst thing you can do here is to be avoidant." And so I took the bull by the horns and dealt with it. (Participant #924, Personal Communication, December, 2015)

"This is a very difficult conversation that we have to have," or it may have some really negative impacts upon another professional. And I do that in a very respectful and mindful way. But I have no problems of doing it to try to save the organism [organization] in its whole by taking care of the problem in its singularity. (Participant #928, Personal Communication, January, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “resolves conflict by de-escalating the emotions in a situation”.

So as long as you can keep your emotional level down, there's a much higher level, much better chance that whoever you're talking to or whoever is reacting to you is going to keep their emotions in check also. (Participant #923, Personal Communication, January, 2016)
…those kinds of emotional conflict are always there. But you have to be grounded, especially when you think of a leader, you have to be grounded. (Participant #920, Personal Communication, January, 2016)

I try to get distanced enough from the issue to not let it get emotional, think about how to solve the problem, try to engage the individuals… (Participant #931, Personal Communication, November, 2015)

The following quotations are representative examples of the ESCI behavioral indicator “allows conflict to fester”.

And I decided that I would ignore them and just proceed, and I was imagining things or not trusting people enough. (Participant #921, Personal Communication, December, 2015)

As far as my effectiveness in making decisions, I guess it was diminished in the sense that I really didn't want to deal with this, even though it was my responsibility. (Participant #902, Personal Communication, January, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “tries to resolve conflict by openly talking about disagreements with those involved”.

So what I learned was to sit down with a physician who needed to change behavior and say, "Hey, I like you, obviously. I selected you as a partner but I don't like your behavior and others don't like your behavior. Let's talk about that a minute. Let's talk about how to get you help for this. (Participant #903, Personal Communication, February, 2016)

So I put things in perspective. I realize that in having conflict, it actually generates good dialogue, and often times you can come to a good resolution, whether or not you agree to something or you agree to disagree. (Participant #905, Personal Communication, February, 2016)

And I think the way you deliver information is critical, especially when it's a negative point, and try very hard to say, "Look, this didn't work for me, this is why it didn't work for me. This is what you could have done differently. What do you think about it?" (Participant #908, Personal Communication, February, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “resolves conflict by bringing it into the open”.

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I know when I make a judgment it's going to make somebody unhappy. And unfortunately today, you are the person I'm going to have to make unhappy." (Participant #913, Personal Communication, January, 2016)

I deal with it at the source by just actually...I don't leave the issue just out there. If we're having a discussion, I'll just, in as professional way as I can describe it, explain what appears to be going on, and ask, "What's the problem?" or "What's the issue here? What are we trying to do?" And depersonalize it. Or if it is personal, all right, let's get it out there. (Participant #931, Personal Communication, November, 2015)

**Coach and Mentor**

The following quotations are representative examples of the ESCI behavioral indicator “provides on-going mentoring or coaching”.

I think mentoring is important and de-briefing issues in advance. And I try to bring them along for the ride. The classic development of young leader techniques where you give them stretched assignments and then you mentor them afterwards, the coaching role, the modeling. Let them lead an idea, but be there to support them. (Participant #927, Personal Communication, December, 2015)

There is another little technique that I have told my residents, and I'm actually mentoring one or two residents right now, in terms of some leadership roles, is that you have to remember that the patient is the one with disease. (Participant #928, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “provides feedback others find helpful for their development”.

I think we got some appropriate help and evaluation for the doc, and then over the next few weeks he met with me a couple of times just to update me on his progress. He ended up coming back to work about a month later. (Participant #909, Personal Communication, February, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “personally invests time and effort in developing others”.

I really try to get other people to acknowledge all of the other people that I'm working with, because I want them to grow into those positions in a way that they're recognized for their successes, have nothing to do with me. (Participant #904, Personal Communication, February, 2016)
I've seen people change their behaviors based on mine, which is a good thing. Maybe not everything that I've done or said. So, in terms of perceptual leadership, I guess if I see that, there must be something good coming out of those interactions. It must be some...and I guess I think it really is modeling. (Participant #927, Personal Communication, December, 2015)

The following quotations are representative examples of the ESCI behavioral indicator “coaches and mentors others”.

So I try and make sure that we are providing people an opportunity for balance and encourage, particularly new execs who feel like they've really got to throw themselves into it, to make sure that they understand there's still that need for balance. (Participant #926, Personal Communication, December, 2015)

I mentored some people through our organization who were not physicians, which I really love doing. Because I think a lot of the principles are the same. (Participant #935, Personal Communication, January, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “cares about others and their development”.

And that's what I told my docs. When they act out on the floors, I tell them, "You know what? My office is safe. Come down, close the door. I don't like to be cussed at. But I'll listen to it. I'd rather you throw all the F-bombs at me and let me sit there and listen to you. At the end, tell you it's going to be better tomorrow, then you doing it on the floor." (Participant #917, Personal Communication, November, 2015)

I really work very hard at trying to make it a safe environment for whoever I'm with. Because if I make them feel safe, then I'm far more likely to be able to influence some change. (Participant #928, Personal Communication, January, 2016)

Influence

The following quotations are representative examples of the ESCI behavioral indicator “convinces others through discussion”.

It's taken me a lot of time to meet with each of the individual hospitalists for about 30 minutes and get their take on, basically, three questions that I ask them. And formulate a better approach to getting them to buy into what I needed them to do and what I required them to do at that time. (Participant #917, Personal Communication, November, 2015)
When you've got a 55-year-old surgeon who's done this his whole career, you
don't have much optimism about him really being able to change. This made me
more optimistic about my ability to have an impact on people. (Participant #919,
Personal Communication, January, 2016)

**Inspirational Leadership**

The following quotation is a representative example of the ESCI behavioral
indicator “leads by building pride in the group”.

I was always one to praise anyone from the woman who cleans the floor up to my
own CEO when I thought they had done something well. I think this whole
concept of praising people, thanking them, personal thank yous, is really
important for leadership. (Participant #903, Personal Communication, February,
2016)

The following quotations are representative examples of the ESCI behavioral
indicator “leads by inspiring others”.

Everybody applauded the strength of the decision because I had overseen an
investigation in a very tight timeframe, come to a conclusion and executed it all
very quickly. So again, my reputation as a leader actually went up. (Participant
#926, Personal Communication, December, 2015)

I think it was balanced and fair and thoughtful and not reactive and punishing.
People got behind me when I asked them to do other things. (Participant #922,
Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral
indicator “leads by bringing out the best in people”.

I like team work, I like doing it well and building systems that actually allow the
teams and providers to do that well. (Participant #922, Personal Communication,
January, 2016)

The following quotation is a representative example of the ESCI behavioral
indicator “leads by articulating a compelling vision”.

I try to be making sure we've got our mission and vision in the front, what are we
trying to do here? And then leave it to then follow it with facts, what do we know,
rather than feelings? What do we know? (Participant #902, Personal Communication, January, 2016)

Teamwork

The following quotations are representative examples of the ESCI behavioral indicator “does not cooperate with others”.

I talk at her, and she talks at me, and we don't get anywhere. (Participant #912, Personal Communication, January, 2016)

I just became very dismissive of him and basically telling how he didn't understand the organization and it's not for him to do this and sort of playing the power play. (Participant #916, Personal Communication, January, 2016)

The following quotation is a representative example of the ESCI behavioral indicator “works well in teams by being supportive”.

So one of my concerns is always to make sure that those folks [clinical staff] who experience that are supported and have some backup. (Participant #935, Personal Communication, January, 2016)

The following quotations are representative examples of the ESCI behavioral indicator “works well in teams by encouraging cooperation”.

I spent a significant amount of time building rapport, getting people together, socializing the concept. (Participant #916, Personal Communication, January, 2016)

…there are other times when you know what the answer is and you have to learn to wait for the people to tell you what the answer is without your speaking it. So that the collaboration will drive it. (Participant #926, Personal Communication, December, 2015)

The following quotations are representative examples of the ESCI behavioral indicator “works well in teams by soliciting others’ input”.

I don't have all the answers, I just don't, and I really try to use them as a sounding board for measuring what should be done and the tone and the nuance of the words. (Participant #908, Personal Communication, February, 2016)
I'll call them and say, "I'm struggling with something. Can you come down?" We can talk about it. (Participant #925, Personal Communication, November, 2015)
References


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