BURNOUT, WORK ENGAGEMENT, AND WELL-BEING IN THE HEALTHCARE PROFESSIONS: A PROPOSAL FOR A DIGITAL INTERVENTION

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I HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER MY SUPERVISION BY ERIC T. REINHART ENTITLED BURNOUT, WORK ENGAGEMENT, AND WELL-BEING IN HEALTHCARE PROFESSIONS: A PROPOSAL FOR A DIGITAL INTERVENTION BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PSYCHOLOGY.

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Abstract

Burnout is a chronic problem for individuals in the helping professions and is particularly pronounced in healthcare settings. Burnout is an extreme stress response characterized by emotional exhaustion, depersonalization of patients, and a decreased sense of personal accomplishment. Factors unique to healthcare settings include high patient to staff ratios, evaluations of effectiveness based on patient outcomes, and the competing demands of policy makers, patients, and clinicians. Work engagement is a product of the positive psychology movement and developed out of the study of burnout. Work engagement is an affective-emotional state of work-related well-being and is characterized as being positive and fulfilling as the individual experiences vigor, dedication, and absorption with their job. Traditional interventions for burnout have focused on individual stress management techniques presented didactically through a workshop experience. The time demands in healthcare settings are not conducive to long workshops or frequent staff in-service trainings. The two aims of this dissertation are to 1) provide literature review on the relevant aspects of burnout and work engagement and 2) present a program description for a digital intervention to reduce burnout and increase work engagement.
# Table of Contents

Chapter 1: Introduction ......................................................................................................................... 1  
The Impact of Burnout ......................................................................................................................... 6  
Statement of the Problem .................................................................................................................... 7  
Purpose of the Present Review ............................................................................................................ 7  

Chapter 2: Review of the Literature ..................................................................................................... 9  
The Constructs of Burnout and Work Engagement .............................................................................. 9  
Issues of Diversity and Burnout .......................................................................................................... 13  
Wellness and Well-being ...................................................................................................................... 17  
Modes of Intervention ........................................................................................................................... 22  

Chapter 3: Methods ............................................................................................................................... 43  
Literature Search ................................................................................................................................. 43  

Chapter 4: FACT-WEB ........................................................................................................................ 45  
Developing the Intervention ................................................................................................................ 45  
Intervention Modules ............................................................................................................................ 47  
Intervention Evaluation ......................................................................................................................... 52  

Chapter 5: Discussion ........................................................................................................................... 56  
Limitations ........................................................................................................................................... 56  
Future Implications .............................................................................................................................. 57  
Conclusion .......................................................................................................................................... 59  

Appendix A: Demographics ................................................................................................................ 61  
Appendix B: Acceptance & Action Questionnaire - II ....................................................................... 62
<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Five Facet Mindfulness Questionnaire – Short Form</td>
<td>63</td>
</tr>
<tr>
<td>D</td>
<td>Oldenburg Burnout Inventory</td>
<td>67</td>
</tr>
<tr>
<td>E</td>
<td>Utrecht Work Engagement Scale</td>
<td>69</td>
</tr>
<tr>
<td>F</td>
<td>Wellness Assessment Tool</td>
<td>70</td>
</tr>
<tr>
<td>G</td>
<td>Module Components</td>
<td>73</td>
</tr>
<tr>
<td>H</td>
<td>Module Scripts</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>Module 1</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>Module 2</td>
<td>77</td>
</tr>
<tr>
<td></td>
<td>Module 3</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>Intervention Feedback</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>References</td>
<td>85</td>
</tr>
</tbody>
</table>
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Chapter 1: Introduction

Burnout is a chronic problem for individuals in the helping professions and is particularly pronounced in healthcare settings. The consequences are multiple and interventions are needed. However, healthcare settings are not ideal locations for such interventions. Digital interventions have been utilized in other settings to promote healthy behaviors because they are easily available and can be incorporated within one’s daily life and show promise as a user friendly intervention.

Healthcare professionals have been relied upon to take on more patients and cope with the inherent systemic challenges while maintaining high standards of care for their patients (Fiabane, Giorgi, Sguazzin, and Argentero, 2013). Approximately 40% of primary care doctors experience burnout to some degree and work with the most intense emotions human beings encounter (i.e. suffering, fear, sexuality, and death) all the while maintaining a stance of compassion and professionalism (Gómez-Gascón et al., 2013). With the implementation of the Affordable Care Act, healthcare demands are expected to increase and it is estimated that healthcare utilization will increase an additional 7.9 percent by 2019 (Hofer, Abraham, & Moscovice, 2011).

Healthcare administrators must navigate the competing demands of patients, policy makers, and clinicians. Each party has their own priorities and values which sometimes conflict with each other and consequently produce tensions and strain within healthcare settings (Moses 3rd, et al., 2013). Patients value what is right for them, prioritize prevention and care, information, and unbiased guidance, as well as perceived value from their providers. Policy makers (i.e. the government and insurers) value what is best for society and prioritize measured effectiveness of interventions, access to care,
and overall cost of care. Clinicians value what is best for medicine and prioritize professionalism, autonomy, science and technology (Moses 3rd, et al., 2013). This tension and consequent job stress is felt by healthcare professionals who are at the intersection of these competing demands.

In addition to systemic tensions, healthcare staff face unique organizational stressors. Healthcare professionals provide an excessive number of patient consultations, take increased responsibility over clinical decisions that are above the level of care appropriate for primary care settings, and experience difficulties in accessing continuing medical training (Gómez-Gascón et al., 2013). Over time the professional’s individual self-defense mechanisms are overcome by stress and burnout follows (Gómez-Gascón et al., 2013).

Burnout is experienced by individuals who have little control over their environments, work with challenging individuals, and experience higher expectations of their job with little time and no additional compensation (Maslach, 1982). These factors lead to an increase in job stress and higher vulnerability to burnout. Burnout has been shown to affect work performance, attendance, and job attrition (Bentley, 2010; Leiter & Maslach, 2009). Healthcare organizations are uniquely structured to cultivate stress and anxiety, as compared to industrial and commercial enterprises. Healthcare professionals and specifically medical and nursing professionals are subject to excessively high rates of stress (Edmonstone, 2013). In addition to contending with increased patient volume and pressures associated with systemic changes, healthcare systems must also negotiate the dynamic tension produced when in the process of providing both preventative care as well as ongoing episodic and acute care (Edmonstone, 2013).
These inherent tensions within the system create anxiety for healthcare professionals and consequently activate defense mechanisms at the individual, group, and organizational levels. These defenses include shifting from patient-focused care to task-focused care, depersonalization of patients, detachment and suppression of feelings, standardization of tasks such that individualized patient care is compromised, checking and rechecking decisions and/or delegation of tasks to senior level staff to avoid responsibility, and finally avoidance of change in general (Edmonstone, 2013).

Jackson and Maslach (1982) found that there are severe consequences when providers experience burnout. Providers turn to substance abuse to cope with the stress (Akvardar, Demiral, Ergör, & Ergör, 2004), their performance decreases (Schaufeli & Bakker, 2004), absenteeism worsens (Rugulies et al., 2007), and turnover increases (Castle, Engberg, Anderson, & Men, 2007; Halbesleben & Wheeler, 2008; Schaufeli, Bakker, & Van Rhenen, 2009; Du Plooy & Roodt, 2010). These consequences are not only costly to the individual experiencing burnout, but also to the patients receiving their care and to the organizations where they are employed.

Burnout develops as providers give more and more of themselves, but receive less and less in return for their efforts (Robinson, Gould, & Strosahl, 2010). Ironically, Pines and Aronson (1988) write that burnout strikes individuals who are the most idealistic and enthusiastic and as a professional’s spirit and zest erode from the daily struggles and chronic stress, they experience burnout. These authors go on to say that the root cause of burnout extends from an existential need to believe our lives have meaning and the things we do are useful and important (Pines & Aronson, 1988). Other researchers and more recent research by Amoaf, Hanbali, Patel, and Singh (2015) found that younger age,
identifying as female, being single, long work hours and low job satisfaction were predictive of burnout in physicians.

Burnout research and the positive psychology movement have led to the conceptualization of work engagement. Work engagement is work-related well-being experienced as an affective-emotional state that is positive and fulfilling. It is characterized by vigor, dedication, and absorption (Bakker, Schaufeli, Leiter, & Taris, 2008). Work engagement has been conceptualized by Maslach and Leiter (1997) as the opposite end of the continuum from burnout. Whereas Schaufeli, Salanova, Gonzalez-Roma, and Bakker (2002) have characterized work engagement as positive and fulfilling as the individual experiences vigor, dedication, and absorption with their job; however, it is not on the same continuum with burnout. The concept of work engagement allows for an understanding of qualities that need to be promoted and bolstered within the work setting as a means to protect against and/or correct burnout.

In an absence of available supports, healthcare professionals may employ many coping strategies independently when experiencing burnout. They may engage in emotion-focused coping strategies that involve efforts to relieve emotional distress or engage in problem-focused coping strategies to address distress by removing the source of the stress (Farrington, 1997; Shinn & Mørch, 1983). Negative emotion-focused coping may include hostility, self-delusion in the form of wishful thinking, avoidance, and escapism through alcohol or drug abuse; whereas positive emotion-focused coping includes reflection, utilization of talking therapies, and clinical supervision (Fearon & Nicol, 2011). Examples of problem-focused coping include development of time management skills, organizational skills, seeking out advice, and clinical supervision.
(Fearon & Nicol, 2011). How helping professionals cope with increased demands and stress can affect their overall wellness and psychological well-being.

Burnout management and the development of work engagement can occur at both the organizational and intrapersonal levels and build upon healthy coping strategies employed by healthcare providers. Examples of the benefits of organizational interventions have been found in research on participation in wellness programs which have been linked to lower incidences of burnout (Amoaf et al., 2015).

Despite burnout being well-researched as a problem, there is no conclusive solution to effectively address burnout (Taormina & Law, 2000). Personal stress management approaches have been a common response to burnout; however, it has been recognized that interventions at the organizational level are also required to prevent and manage burnout (Farrington, 1997; Maslach & Leiter, 1997).

When interventions are directed towards the individual, personal stress management approaches have focused on promoting more effective interpersonal skills, self-management skills, and psychological preparedness (Taormina & Law, 2000). Organizational interventions, however, help professionals connect with their values, foster a sense of fairness within the organization, and reward hard work and commitment and thus will address the needs of individuals likely to experience burnout and leave the organization (Leiter & Maslach, 2009).

Certain domains of medicine will produce varying forms of stress and eventual burnout in its providers. Robinson, Gould, and Strosahl (2010) write that the field of family medicine is one such domain. Due to the nature of family medicine, the primary care physician (PCP) is saddled with the role of case manager. PCP’s must work with specialty care providers and coordinate treatment while working closely with patients for
effective treatment. A uniquely bonded relationship can result in shared triumphs and shared pain when the patient experiences changes in health (Strosahl, 1994). Within this specialized environment, primary care has become the de facto behavioral health system, particularly for marginalized populations like the elderly, racial minorities, rural areas, and the lower socioeconomic statuses (Strosahl, 1994). Prior to the shift to integrative models of care and Health Homes, PCP’s provided half of all behavioral health care in the United States and prescribed nearly two-thirds of all psychotropic medications (Strosahl, 1994).

During times of declines in patient health and feelings of sorrow, providers are vulnerable to become discouraged and may experience their underlying values begin to fade. Connection to one’s purpose and mission during those times of sorrow can provide the emotional and intellectual energy to persist through those times (Robinson et al., 2010).

**The Impact of Burnout**

Burnout impacts the level of fulfillment one experiences in their work and can lead to both emotional and physical exhaustion (Thomsen, Soares, Nolan, Dallender, & Arnetz, 1999). Individuals experiencing burnout are less physically active as a result of exhaustion (Toker & Biron, 2012). Burnout not only affects the individual by increasing psychological distress and weakening physical health, it also impacts the quality of care provided to patients (Fiabane, et al., 2013). On an organizational level, burnout also affects absenteeism and turnover. Patients report a reduction in satisfaction and compliance when treated by an individual experiencing burnout (Leiter, Harvie, & Frizzell, 1998). Patients were more likely to report a lower level of health care and
experienced a lower level of patient safety from nurses who reported higher levels of burnout (Fiabane, et al., 2013; Rogers, Hwang, Scott, Aiken, & Dinges, 2004).

Once providers begin to experience burnout there are consequent increases in anxiety and depression, as well as an increased risk of suicide and substance abuse (Fiabane, et al., 2013; Pompili et al., 2006). Montero-Marín, Prado-Abril, Demarzo, Gascon, and García-Campayo (2014) found a progressive decrease in engagement in order to cope with stress and frustration.

**Statement of the Problem**

The research clearly identifies burnout as a chronic problem for healthcare providers with dire consequences, supporting the need to develop interventions aimed at promoting personal work engagement. There is a robust amount of literature on interventions addressing burnout for a variety of professions; however, there is a lack of information identifying specific components of interventions considered effective in treating burnout in primary care medical settings. Further, there are no published studies that have utilized either digital interventions as a viable intervention within medical settings to address burnout or the potential barriers/resistances to engaging in an intervention.

**Purpose of the Present Review**

The purpose of this project is to utilize a comprehensive literature review on burnout to inform an intervention that would be appropriate within medical settings. To maintain a high standard of care, improve efficiency, and reduce costs of care, both healthcare providers and health care settings need to be aware of effective options for managing burnout and promoting work engagement. An intervention needs to be designed in such a way as to be practical, easily accessible, and sensitive to the demands
of healthcare providers and settings. The literature review will end with a proposal for such an intervention.
Chapter 2: Review of the Literature

This literature review begins with how burnout and work engagement have been conceptualized and studied in the past. It then transitions to the constructs of wellness and well-being and their relation to burnout. Proposed interventions for the treatment and prevention of burnout are outlined. Discussion of the effectiveness and limitations of digital interventions then follows.

The Constructs of Burnout and Work Engagement

Burnout as a construct was pioneered by Christina Maslach in the early 1970s as she took an exploratory approach to identify patterns as they emerged from her research (Pines, Aronson, & Kafry, 1981; Maslach, 1982). She characterized burnout as a syndrome affecting individuals that do “people work” (Maslach, 1982). She conceptualized burnout as emotional exhaustion, depersonalization, and reduced personal accomplishment. Burnout is a stress response that results from the social interaction between helpers and recipients and from the chronic emotional strain experienced when working with people, particularly those who are experiencing problems or who are troubled (Maslach, 1982). The resulting emotional overload leads to emotional exhaustion.

Emotional exhaustion is the feeling of being drained or used up. Individuals who are emotionally exhausted may limit their interactions with others, do only what is necessary to do the job, and convey a cold, cynical, or negative attitude toward others (Bentley, 2010). Depersonalization can be expressed when individuals act in a bureaucratic manner, pigeonhole people, respond categorically, and do not see the
recipients of their help as individuals (Maslach, 1982). This detachment creates emotional distance as a way to cope with being emotionally overwhelmed and can lead to an emotional numbing and insensitivity to others’ needs. As the depersonalization process continues, others are viewed negatively, poor opinions are developed, and the worst is expected (Maslach, 1982). Depersonalization can then lead to actively disliking the people being helped. This may result in a decrease in the amount of appropriate care, help, or service performed by the healthcare professional.

Individuals whose sense of personal accomplishment is decreased begin to experience feelings of inadequacy (Bentley, 2010). This feeling of reduced personal accomplishment is the last aspect of burnout to appear. Healthcare professionals begin to label themselves as failures when they are unable to relate to the recipients of their care. Their image of themselves and subsequently their self-esteem is tarnished. This feeling is internalized and considered a personal problem. Consequently, depression may set in leading the professional to seek therapy for themselves or leave their job (Maslach, 1982).

Since Maslach’s original conceptualization of burnout, the construct of burnout has evolved. Lazarus (1966), in his theoretical approach to stress and emotion, proposed that emotions determined the success or failure of goals. He conceptualized appraisal as the impact of events on a person’s strivings, and over time different patterns of appraisals accounted for different emotional states. This theory was later expanded upon by Lazarus and Folkman (1984) who posited that daily hassles can cause more suffering than major traumatic events. Hobfoll (1989) attempted to explain burnout as a consequence of resource depletion. He developed a conservation of resources (COR) theory that proposed that burnout occurs when the individual has exhausted their social
and personal resources. Currently there is no consensus for an international definition of burnout (Bährer-Kohler, 2013).

The nursing profession is one of the most widely studied in the field of burnout (Leiter & Maslach, 2009). There have been six areas of work life that have been identified which inform what causes burnout and who is most susceptible to it. These areas are predictive of burnout when a mismatch between the person and job is present (Leiter & Maslach, 2009). The six areas include workload, control, reward, community, fairness, and values. It has been found that workload and control play critical roles in burnout, but do not sufficiently account for burnout. Reward, community, and fairness aid in value prediction. Values are a critical predictor for the three elements of burnout (Leiter & Maslach, 2009). Values or ethical conflicts tend to undermine job satisfaction for nurses.

Leiter and Maslach (2009) were able to replicate a previous study that supported a finding that exhaustion predicted cynicism, which in turn predicted inefficacy. In addition, value congruence predicted all three dimensions of burnout and workload was directly linked to exhaustion. Control was predictive of fairness, reward, and community (Leiter & Maslach, 2009). Fairness was predictive of values. Consequently, burnout was predictive of turnover intention. Moreover, reward showed a clear path to cynicism and fairness. In summary, cynicism is a function of psychological withdrawal and is associated with quitting a job, which is a function of physical withdrawal (Leiter & Maslach, 2009).

There are three primary issues associated with cynicism: exhaustion from an unmanageable workload, value conflicts in settings that do not support the medical model of care, and an inadequate rewards system. Control is the root of the model laid out by
Leiter and Maslach (2009) which represents the capacity of healthcare professionals to work according to their values, which facilitates the development of a healthy, balanced, and sustainable work life. Pines, Aronson, and Kafry (1981) suggest there are several factors that can influence the experience of burnout. These factors included the ratio of staff to clients, the availability of “time outs” during periods of stress, the amount of time spent in stressful situations, and the severity and complexity of problems that were experienced by clients, as well as organizational factors like flexibility, training, the presence of positive work conditions, and work significance.

The concept of work engagement has arisen from the research on burnout and in response to the positive psychology movement. As a new construct, a unifying theory has not been developed, therefore several conceptualizations of work engagement have arisen out of the literature (Schaufeli & Bakker, 2010). This avenue of research is less pathologizing to the individual and also aims at improving productivity and quality of work within the organization.

Maslach and Leiter (1998) have conceptualized work engagement as the opposite end of the continuum from burnout. For Maslach and Leiter (1998), work engagement is made up of three components: energy, involvement, and efficacy. Energy is the direct opposite of exhaustion, while involvement is the direct opposite of cynicism, and efficacy is the opposite of ineffectiveness.

Schaufeli, Salanova, Gonzalez-Roma, and Bakker (2002) have defined work engagement as an affective-emotional state of work-related well-being and is characterized as being positive and fulfilling as the individual experiences vigor, dedication, and absorption with their job. Vigor is characterized by high levels of energy and mental resilience, as well as the willingness and persistence to invest effort into one’s
work, despite difficulties (Schaufeli & Bakker, 2010). Dedication is reflective of strong involvement in one’s work. Dedicated individuals experience a sense of significance, pride, enthusiasm, inspiration, and challenge from their work. Absorption in work is characterized by being fully concentrated and engrossed in one’s work. An individual absorbed in work experiences time moving quickly and they may experience difficulty detaching themselves from the work (Schaufeli & Bakker, 2010).

Work engagement as Schaufeli et al. (2002) have defined it, however is not on the same continuum with burnout, but exists as its own independent dimension. Within their conceptualization, vigor and dedication are considered direct opposites of exhaustion and cynicism, which are the core symptoms of burnout (Schaufeli & Bakker, 2010). The continuum spanned by vigor and exhaustion in this conceptualization has been labelled as “energy” and the continuum spanned by dedication and cynicism has been labelled as “identification.” Thus, work engagement can be characterized by a high level of energy and a strong identification with one’s work (Schaufeli & Bakker, 2010).

Although Schaufeli et al. (2002) have postulated work engagement as an affective state that is generally consistent over time, in contrast Sonnentag, Dormann, and Demerouti (2010) have suggested the affective state of work engagement may be more variable and can fluctuate from day to day or even moment by moment. This may have implications on the development of intervention designs as the field attempts to answer questions about when people experience work engagement or what specific situations are required within the work day for a worker to feel engaged (Sonnentag et al., 2010).

**Issues of Diversity and Burnout**

Burnout is experienced differently depending on an individual’s unique diversity variables. Four variables are particularly influential in the experience of burnout. These
variables are an individual’s gender, culture, time in profession, and age. Although the intersection of each individual’s diversity variables shapes the context of their lives and how they experience stress and burnout, three dimensions have been given attention in the literature. Liu and Spector (2005) review several ways culture influences the experience of job stress generally. Pines and Aronson (1988) discussed how gender influences burnout and Peisah, Latif, Wilhelm, and Williams (2009) explored how older doctors manage their distress and symptoms of burnout.

One of the most important cultural dimensions impacting the experience of job stress is individualism/collectivism. This dimension impacts an individual’s perception of job control which is directly related to burnout’s dimension of personal achievement. Individualistic cultures value independence and control in life and tend to seek high levels of job control (Liu & Spector, 2005). Collectivist cultures place more value on compliance and interdependence and view the group as having legitimate control over individual actions; therefore members of collectivist cultures do not expect to have as much job control (Liu & Spector, 2005). In relation to well-being, collectivists value the well-being of the group over the individual.

The opposite is true for individuals who tend to take more actions to improve their well-being, and consequently report higher levels of job satisfaction (Liu & Spector, 2005). This dimension also impacts social support, which mitigates both job stress and burnout. Collectivists enjoy more social support and therefore experience a promotion of well-being and lowered job stress (Liu & Spector, 2005). Liu and Spector (2005) acknowledge the current literature has not teased out the interaction between job control and social support and their impact on well-being and job stress.
Power distance (PDI) also affects an individual’s response to job stress. In cultures with high PDI, it would be unacceptable to question decisions of superiors and subordinates are pressured to meet the demands of their superiors (Liu & Spector, 2005). The combination of low control and high demand are characteristically stressful. Individuals from high PDI cultures may also value structure and clarity in their work roles; therefore, too little direction by supervisors may be experienced as stressful (Liu & Spector, 2005).

Pines and Aronson (1988) explored differences in burnout between men and women. They found that role conflict was a major stress shared by women who combined the careers of homemaker and professional and was often the primary cause of burnout. Pines and Aronson (1988) postulated that women were attempting to get a sense of meaning from both endeavors; however, given the intrinsic conflict between the two, women tended to have a sense of failure in both. In addition to role conflict, women are faced with sex-role stereotyping. Traditionally, women were believed to prefer or be suited to professions such as teaching, counseling, or nursing. This is reflected in how women are disproportionately represented in teaching, nursing, counseling, social work, and social welfare (Pines & Aronson, 1988). Each of the professions are faced with intense, painful, or emotionally demanding situations.

Compared to men, women have only slightly higher levels of burnout, but are four times more likely to experience burnout at extreme levels. In those situations, women felt they had less freedom, autonomy, and influence in their work. They also experienced less variety, less challenge, and were in a less positive work environment (Pines & Aronson, 1988). Women also reported experiencing fewer opportunities for self-expression or self-actualization, and were less rewarded for their work. These
experiences were compounded by discrimination and harassment in male-dominated professions. Henning and Jardim (1976) found sex-role differences may lead to women having higher career expectations than men and when those expectations were not met, burnout followed.

Gender segregation is prominent in healthcare professions and likely a reflection of traditional social roles (Demarais & Alksnis, 2005). Traditionally physicians have been men and nurses have been women. In 2003 the proportion of men to women in medical school was nearly equal; however, by 2010 that proportion began to slip back in favor of men (Roskovensky, Grbic, & Matthew, 2012). Despite this segregation, Demarais and Alksnis (2005) note there are more commonalities than differences in the way men and women experience work stress, as women are now fully engaged in the workplace and men are increasingly more involved in family life. This is not to discount the social costs to segregation in the workplace or other stressors like tokenism, the “maternal wall,” the “glass ceiling,” or sexual harassment that women experience within the workplace (Demarais & Alksnis, 2005). These dynamics persist within the workplace and extend into healthcare settings.

Peisah et al. (2009) found several differences between the experiences of older doctors and younger doctors. Younger doctors experience higher levels of burnout as compared to older doctors. There appears to be several factors influencing this trend. First, older doctors more frequently work in private practice and doctors in private practice reported less emotional exhaustion than those working in a public healthcare setting (Peisah et al., 2009).

Older doctors had developed defenses or barriers to burnout over time. One prevalent defense was the development of strong personal boundaries (Peisah et al.,
These boundaries helped the doctors separate their patient’s problems from their own and limited how much they gave of themselves. Another defense included changing work hours, learning to be assertive by saying “no” or asking for help, and finding new ways to increase personal accomplishment, like engaging in charitable work (Peisah et al., 2009). Older doctors also experienced a sense of liberation as they gained comfort and confidence in their work and what they were able to achieve in consultation with patients (Peisah et al., 2009). Through their experience and knowledge, they were more at ease discussing difficult or awkward topics, were more confident in their clinical skills, and in general felt more mature (Peisah et al., 2009; Dyrbye et al., 2013).

**Wellness and Well-being**

Although wellness is a commonly used term in many domains of professional service, it is difficult to conceptualize and has not been universally defined (Strout, 2012). The National Wellness Institute has defined wellness as a “multidimensional and holistic state of being that is conscious, self-directed, and constantly evolving to achieve one’s full potential” (Strout, 2012, pg. 130). Wellness is described as an ongoing process in constant flux and is described by the National Wellness Institute as the interaction between six dimensions that interconnect to represent the whole person. The six dimensions include: occupational wellness, social wellness, intellectual wellness, physical wellness, emotional wellness, and spiritual wellness (Strout, 2012).

Occupational wellness focuses on one’s ability to contribute their unique skills to personally meaningful and rewarding work, regardless of pay. The domain of social wellness reflects the ability to form and maintain positive relationships ranging from personal to community wide. Intellectual wellness reflects an individual’s commitment to lifelong learning by continuing to acquire skills and knowledge. The dimension of
physical wellness encompasses the commitment to self-care. Individuals engage in self-care through engaging in regular physical activity, healthful eating, and appropriate utilization of health care. Emotional wellness reflects an individual’s ability to accept personal responsibility for life decisions and outcomes with emotional stability. Spiritual wellness is the last dimension and encompasses having a life purpose and value system (Strout, 2012).

Puig et al. (2012) found a connection between personal wellness and job burnout in mental health professionals. Using multiple regression analysis, Puig et al. (2012) found a negative relation between emotional exhaustion from burnout and physical exercise and nutrition. The exact nature of the relationship is unclear. One conclusion could be that those individuals who are emotionally exhausted do not feel up to the task of exercising or eating well on a regular basis. Conversely, those that do not exercise or eat well regularly are more susceptible to emotional exhaustion (Puig et al., 2012).

Competence is directly related to stress management and skillful behavior, as well as self-worth. Puig et al. (2012) found a negative relationship between incompetence from burnout and stress management and self-worth. Puig et al. (2012) also reported negative relationships between non-work-related activities and hobbies and burnout. Although this study focused on mental health professionals, it is likely that healthcare professions have shared experiences.

In contrast to wellness, Seligman (2011) has proposed a construct of well-being based on five elements. The five elements include: positive emotion, engagement, meaning, achievement, and relationships. Positive emotion is the subjective measure of happiness and life satisfaction. Engagement is the subjective feeling of being absorbed in a task and can only be assessed retroactively, as the individual would have lost their self-
consciousness while they were engaged. The third element is meaning, which according to Seligman (2011) is the sense of belonging and providing service to something perceived as bigger than one’s self. Accomplishment is the pursuit of success, winning, achievement, and mastery for its own sake. The last element is positive relationships.

The World Health Organization (WHO) has defined health promotion as a process which assists individuals in increasing control and achieving the desired outcome in their physical, mental, and social well-being (Strout, 2012). The WHO has emphasized that recognition of aspirations, a satisfaction of needs, and changes or coping with the environment must take place before health can be promoted (Strout, 2012). In support of this, Faragher and Cass (2005) conducted a systematic review and meta-analysis of studies suggesting a link between job satisfaction levels and health. The results of their study suggested that job satisfaction was strongly associated with mental or psychological problems. The strongest relationships were between burnout, self-esteem, depression, and anxiety; whereas the correlation between burnout and subjective physical illness was modest (Faragher & Cass, 2005).

According to Strout (2012), there is a gap in nursing knowledge regarding how and when to promote health and wellness within their patients and within themselves. Due to this gap, nurses and healthcare professionals would benefit from a process that would aid in increased awareness of self, their values, and a strategy to develop meaningful goals and objectives aimed at increasing personal wellness and psychological flexibility thereby reducing their susceptibility to burnout (Strout, 2012).

At the intersection of wellness and well-being unique parallels can be drawn between the positive psychology movement and current cognitive-behavioral therapies. Ciarrochi, Kashdan, and Harris (2013) identify several parallels between Acceptance and
Commitment Therapy (ACT), the theory adopted by Robinson et al. (2010), and positive psychology, which Fiabane et al. (2013) used to define the construct of work engagement. Parallels between the two theories include a focus on strengths and a promotion of flourishing. The two theories overlap between the way goals are set, mindfulness is utilized, psychological strengths are emphasized, how values are clarified, and what creates meaning in life (Ciarrochi et al., 2013). In addition, they both seek positive change at individual, interpersonal, organizational, and cultural levels.

Ciarrochi et al. (2013) propose seven foundations bridging the two theories. Their selections were guided by research and the practical ability to facilitate cognitive and behavioral changes in the interest of well-being. They propose that the seven foundations mediate the relationship between interventions and the various aspects of well-being (Ciarrochi et al., 2013). The seven foundations include: (1) functional beliefs about the self, others, and the world, (2) mindfulness and awareness, (3) perspective taking, (4) values, (5) experiential acceptance, (6) behavioral control, and (7) cognitive skill (Ciarrochi et al., 2013).

ACT encourages the identification of functional beliefs, recognition of their dominance over other pieces of information, and an evaluation of the workability of those functional beliefs in the current situation. On the other hand, positive psychology promotes more positive beliefs like hope, self-esteem, and an orientation of positive problem-solving (Ciarrochi et al., 2013). Mindfulness refers to the importance of having a conscious awareness of the present moment, and events observed with an open and receptive attitude. The open and receptive attitude is characterized by turning toward one’s experience with curiosity. In positive psychology, mindfulness is used as a platform to repair negative moods or enhance positive moods. ACT would not seek to
directly change mood, but would utilize mindfulness skills to increase engagement in current tasks and appreciation of the current moment, regardless of whether it is pleasant or not (Ciarrochi et al., 2013).

Perspective taking has not received much attention by positive psychologists. It is typically identified as a character strength and merges constructs of “personal intelligence” and “perspective.” In ACT, this foundation has been characterized as an observer perspective, termed “self-as-context,” and conceptualized as an awareness of the flow of your experience, without being invested or attached to the experience (Ciarrochi et al., 2013).

Values are generalized as descriptions of what people are personally invested in, hold in high regard, and tend to uphold and defend. Positive psychology identifies values as personal strivings, goal setting, or personal philosophies for what is most important in life. Whereas in ACT, values are identified global qualities towards which purposeful action is taken (Ciarrochi et al., 2013).

ACT conceptualizes experiential acceptance as embracing “private experiences," like thoughts, feelings, memories, and sensations without trying to avoid or get rid of them. Acceptance of these private experiences facilitates a willingness to engage in valued activities, despite unpleasant private experiences. In contrast, experiential avoidance is the attempt to avoid or get rid of unwanted private experiences and can lead to suffering and inaction (Ciarrochi et al., 2013). Positive psychology organizes experiential acceptance within the domain of mindfulness or effective emotional regulation. One major discrepancy is that ACT does not seek to manipulate the private experience. The focus in ACT is to help people be with the experience, whether it is pleasant or unpleasant, and doing what is important (Ciarrochi et al., 2013).
The sixth foundation is behavioral control. In ACT, this is conceptualized as commitment when directed toward a value. In positive psychology, behavioral control might be described as perseverance, self-regulation, or willpower. Research has focused on what promotes goal success, including mental contrasting (e.g. consideration of benefits and barriers to goals), implementation intentions (e.g. development of “if-then” plans to deal with barriers to goals), and self-concordance of goals (e.g. alignment of goals to inner-most needs) (Ciarrochi et al., 2013). Ciarrochi et al. (2013) distinguish values from commitment for pragmatic purposes. Values and purpose characterize knowing what you want and behavioral control characterizes acting on what you want.

The last foundation, cognitive skill, embodies several components of intellectual functioning. The specific components include reasoning, problem-solving, and attentional control. Ciarrochi et al., (2013) conclude that both ACT and positive psychology hold neutral stances on this foundation, but both theories conclude cognitive skills are an asset in developing workable solutions to life’s struggles. Researchers have demonstrated these skills are not fixed and are more modifiable than once hypothesized. The cognitive skill foundation is necessary for a complete conceptualization of well-being (Ciarrochi et al., 2013).

**Modes of Intervention**

A variety of interventions have been offered to address burnout and mitigate the costs of burnout. The preponderance of interventions have been directed toward individuals (Awa, Plaumann, & Walter, 2010). Within organizations, burnout is frequently perceived as an individual problem and these organizations expect individuals to work out their own problems. Individual intervention is expected to cost less and places the responsibility of treatment on the worker, not the organization; however,
results are short-term lasting six months or less and typically only address stress management (Awa et al. 2010; Romani & Ashkar, 2014).

Researchers have tested the effectiveness of interventions done on the individual level, organizational level, and simultaneously at both levels and 80% of all programs reduce burnout (Awa et al., 2010). Generally, interventions are much more successful when implemented across both levels (Cartwright & Cooper, 2005). Awa et al. (2010) found that organizational level approaches produced long-term results lasting at least 12 months.

LaMontagne, Noblet and Landsbergis (2012) write that individual level approaches are effective at the individual level; however, there are no favorable impacts at the organizational level. High systems approaches, interventions focused at both the individual and organizational levels, conferred benefits across both levels (LaMontagne et al., 2012). Since 1990, an upward trend was noticed in the amount of high and moderate (organizational-level only) systems approaches in the literature regarding job-stress interventions.

This author’s review of interventions suggests the majority of individual-level interventions are conducted didactically in group or classroom settings and may also have an experiential component. Interventions for burnout have been researched globally; however, the majority of research has been conducted in Europe and the United Kingdom with fewer studies being conducted by the United States and other countries and fewer yet conducted in China and the Asia-Pacific (Oi Ling, Cooper, & Phillips, 2014).

Maslach’s (1982) treatise on burnout provides a framework on which to build a comparison of burnout interventions. She acknowledged the need to address burnout at the individual, social, and institutional levels. As the current understanding of burnout
has changed and the focus has shifted to work engagement, current interventions reflect that shift since Maslach’s (1982) initial recommendations.

Models of treatment differ depending on the theoretical underpinnings that define either burnout or work engagement. Differentiation between burnout and work engagement is also reflective of a theoretical shift. Models of intervention addressing the alleviation of burnout reflect a traditional view of mental health, whereas models promoting work engagement are more reflective of the positive psychology movement. This section explores these two points of view from the individual and organizational levels.

An early model was proposed by Pines, Aronson, and Kafry (1981) who provided recommendations for interpersonal coping, social support systems, and organizational strategies. These strategies were theoretical in nature and supported by existing research in the field in regard to respective domains; however, no studies were conducted in regard to implementation of those recommendations at the time of publication. Pines et al. (1981) identified six variables to address interpersonal coping. These variables were: learning, meaning and significance, success and achievement, variety, flow experiences, and self-actualization and posited there are four strategies to cope with burnout and tedium.

A coping grid was developed to frame the four strategies. The two dimensions of the grid consisted of direct/indirect actions and active/inactive strategies. Direct action occurs when individuals attempt to master the stressful transaction in the environment. Indirect action is an attempt to make internal changes to the individual’s behavior or emotion. Active strategies are attempts to confront or changes the source of stress, whereas inactive is an avoidance or denial of the stress by either cognitive or physical
means (Pines et al., 1981). Their recommendations for interpersonal coping consisted of an examination of individual coping, goal setting, acknowledging time, acknowledging vulnerabilities, compartmentalization, providing one’s own reinforcements, changing dispositional self-attributes, and positive attitude (Pines et al., 1981).

In regard to the social support systems, Pines et al. (1981) emphasized the importance of social support as a primary moderator in burnout and tedium. Demands or ambiguity of demands from support systems are a source of burnout. This is juxtaposed to the use of support systems to cope with burnout. Pines et al. (1981) recommend first identifying the pressures that are imposed by the individual’s social systems, then clarifying the functions of the social systems. Functions include: listening, technical appreciation and challenge, emotional support and challenge, and sharing a social reality (Pines et al., 1981).

The quality of work relationships and the experience of a trusting and caring environment within the organization were found to be important in moderating and preventing burnout (Pines et al., 1981). Staff meetings in particular can be used as an organizational buffer for burnout. Meetings can be structured to provide task focus and emotional support. Staff can be provided the opportunity to discuss problems, define those problems, and then engage in problem-solving. Staff meetings can also provide opportunities to exercise autonomy and control within the organization (Pines et al., 1981). More recently, Romani and Ashkar (2014) provide support to Pines et al. (1981) recommendations as they identified studies suggesting Balint sessions, that aim to teach doctors how to use a patient-centered approach and focus on the doctor-patient relationship, are helpful in reducing stress and burnout particularly for residents. Balint
sessions have also been found to increase job satisfaction between 3-15 years later (Romani & Ashkar, 2014).

On an organizational level, Pines et al. (1981) recommend that organizations reduce professional-to-patient ratios as there is a tendency in most human service organizations to impose larger ratios due to cost/benefit calculations or insufficient staffing. However, those calculations save money only in the short run (Pines et al., 1981). Pines et al. (1981) also recommend increasing the availability of “time outs” from stressful situations and limiting the hours of stressful work.

In addition, Pines et al. (1981) also recommend the organization increase in flexibility as opposed to the individual accommodating the organization. Enabling workers to select and engage in preferred tasks or duties helps to decrease burnout, as well as creating opportunities to allow growth and change in staff members. Providing training opportunities and formal education can increase self-fulfillment.

Pines et al. (1981) also recommend the development of positive work conditions by addressing environmental pressures, which include noise, uncomfortable work settings, and extreme temperatures. Organizations need to foster a sense of work significance so that professionals can experience a sense of completion. This may be achieved through the establishment of clear organizational objectives or goals and by providing feedback and constructive criticism (Pines et al., 1981).

In response to sparse empirical research, Shinn and Mørch (1983) proposed a “tripartite model” to cope with burnout. Their model emphasized the use of strategies that can be used by individual workers, groups of workers, and by human service agencies. Two studies were conducted to test their hypothesis that individual coping strategies would nominally impact job-related strain while group and organizational
strategies would be effective. Shinn and Mørch (1983) also wanted to examine the relative effects of individual problem-focused and emotion-focused strategies, in spite of their unanticipated effects.

Their first study consisted of a mail survey to 141 members of a professional society and consisted of respondents from a variety of human service settings (Shinn and Mørch, 1983). The six page questionnaire was coded by two raters for the presence of the six coping strategies delineated by Pines et al. (1981) as well as four levels of group coping. Shinn and Mørch (1983) also measured alienation, job satisfaction, psychological symptoms, and somatic symptoms. Their second study utilized in-depth interviews with 82 child care workers who worked in residential programs for youth. The workers were asked to describe a stressful incident and ongoing sources of job stress. The participants were then asked how they, their coworkers, their supervisor, and their agency coped and what alternative actions could have been taken (Shinn & Mørch, 1983).

The results of their work suggested the most common individual coping strategy was focusing outside of the job on either activities or family and friends. Other strategies included building competence by attending workshops and conferences, change of approach to the job by setting realistic limits on activities or taking breaks and vacations, and cognitive/emotional strategies which included withdrawal, isolation, focusing on the positive, feeling depressed or getting angry (Shinn & Mørch, 1983). The authors noted that participants were less apt to report their co-workers used active strategies and saw others focusing outside the job less than they did themselves.

The participants offered a variety of strategies agencies could implement to avoid worker burnout. Responses included building competence through training, providing
more consultation, limiting caseloads, and increasing variety. Some responses were bitter or angry in nature as the participants felt nothing was being done by the agency to prevent burnout (Shinn & Mørch, 1983). The group strategy was social support and responses were varied and coded on an intensity dimension ranging from “none” to “much." The group and institution level changes made substantial contributions to favorable worker attitudes toward their jobs (Shinn & Mørch, 1983). For example, Bakker et al. (2008) suggest there is evidence to support that job resources, for instance social support from supervisors or colleagues, performance feedback, skill variety, autonomy, and learning opportunities are all associated with encouraging work engagement.

Using multiple regression analysis, the effects of coping strategies on levels of strain (alienation, job satisfaction, psychological symptoms, and somatic symptoms) were analyzed. Their analysis indicated no reliable relation between the four strain measures and individual coping variables aside from a marginal relation to somatic symptoms (Shinn & Mørch, 1983). There was an indication that problem-focused responses were associated with reduced strain while emotion-focused responses were not. Group and agency strategies were reliably related to a reduction of strain in the areas of job satisfaction and alienation. This relation was consistent at the agency level whether the strategy was problem-focused or emotion-focused, whereas group and individual emotion-focused strategies were not reliably related to any outcome measure (Shinn & Mørch, 1983).

**Organizational-level interventions.** When reviewing the literature regarding organizational-level interventions, there are several areas of concern to consider. According to Biron, Karanika-Murray, and Cooper (2012) there is a schism between
research and practice in terms of organizational-level interventions. There has been an increase in publication of organizational-level intervention studies; however in practice, organizational-level interventions are infrequently implemented or do not produce the anticipated results (Biron et al., 2012). Biron et al. (2012) posit this schism is due to an insufficient amount of attention paid by researchers to contextual or process factors.

These factors may impact how an intervention is implemented and consequently the intervention’s effectiveness. They suggest attending to factors such as level of management support, employee participation and perceptions, the social climate, cultural maturity, and readiness of change (Biron et al., 2012). Due to the complexity of organizations and the associated variables that need to be controlled, Biron et al. (2012) conclude the evaluation of effectiveness of organizational-level interventions cannot be limited to quantitative methods, like randomized controlled studies, but that a pragmatic mixed-methods approach be utilized so that researchers better understand the context and processes driving the effectiveness of organizational-level interventions.

In their work, LaMontagne et al. (2012) focused on barriers to implementing organizational-level interventions. There are both micro and macro level challenges to implementing organizational-level interventions as the process is time consuming and resource intensive. Micro-level challenges include gaining management support, demonstrating a need for comprehensive worker and work-directed interventions, the establishment of the participatory process, as well as the early detection of opportunities and threats (LaMontagne et al., 2012). Macro-level challenges arise from larger systems outside the organization, for instance the overall labor market, the local, national, and international economies, national cultures, the political environment, all of which influence regulation and public policy. The current industry trend emphasizes a
maximization of productivity and profitability with little regard to individual or organizational health (LaMontagne et al., 2012). This trend is reflected in healthcare settings as staff are expected to see more patients in less time and with higher outcomes (Gómez-Gascón et al., 2013).

**Individual-level interventions.** Maslach’s early work on burnout provides a framework to explore how other researchers have implemented or expanded upon her initial recommendations for burnout intervention on the individual level. Maslach (1982) offered several suggestions for individuals experiencing burnout, which she classified into two categories. The first category was labelled: “working smarter, not harder.” The second category of recommendations focused on strategies to care for oneself and others.

The first category, “working smarter not harder,” implies many people will work harder to catch up and gain control of the workload, but end up accelerating the rate at which they experience burnout. She provides four recommendations within this category: setting realistic goals, doing the same thing differently, breaking away, and taking things less personally (Maslach, 1982). Working smarter means changing the way the job is handled so stress is decreased and efficiency increased. There are several possibilities for working smarter. One suggestion is to set realistic goals as opposed to striving for noble ideals (Maslach, 1982). Ideals are abstract and refer to goals that might be vague or overgeneralized and impossible to achieve. Instead, professionals are encouraged to set specific accomplishments that are well defined and in concrete terms for the day, month, and year. In order to be realistic, there should be a reasonable chance the goals can be accomplished within the specified time frame (Maslach, 1982). To be realistic, the professional needs to be aware of their strengths and limitations.
The next recommendation is doing the same thing, only differently (Maslach, 1982). Being in a rut can predicate a sense of helplessness. Helplessness can produce frustration and anger, which may lead to emotional exhaustion and hostility (Maslach, 1982). When in a rut, healthcare professionals are encouraged to change their work routine. This may be done by adopting a new model of therapy, developing new responses or greetings on the telephone, when with patients, or starting new groups or activities. The focus should be on things that can be modified (Maslach, 1982). There may be aspects of the job that cannot be changed, like institutional rules. Contact with patients or clients can be shuffled to different parts of the day or might be broken up by periods of paperwork. This changing of patterns helps provide a sense of autonomy and personal freedom. In addition to developing a sense of personal control, changing work patterns may also alleviate the source of stress (Maslach, 1982).

Maslach’s (1982) third recommendation is to break away. Breaking away can be a five minute break in the day or a pause in contact with others. These pauses can provide a moment to slow down, regain calm, or stop a situation that may be escalating. Breaks can provide psychological distance from problems. Recent research on mindfulness meditation provides empirical support for taking pauses and centering attention (Goodman & Schorling, 2012). Organizations have built-in or mandated break times in the morning and afternoon, as well as lunch breaks. These times are often used to catch up on work, make telephone calls, or do other chores; however, this time should be spent away from clients or patients. Professionals may leave the office and go for a walk, read a book, play cards, exercise, listen to music, or engage in any other activity that is self-indulgent and creates some mental or emotional distance from work demands (Maslach, 1982).
An extension of this recommendation is to be thoughtful when choosing to work overtime. Professionals should not overdo overtime and consider whether the benefits of catching up on work outweigh costs like not receiving overtime pay or additional time off. The consequences of overdoing overtime include increased emotional exhaustion, hostility, and resentment, which can be directed toward clients, patients, or co-workers (Maslach, 1982). There may also be periods of time when a work change is required. This might take the form of “downshifting” or doing other less emotionally stressful work, while more stressful responsibilities are handled by someone else for a period of time (Maslach, 1982).

Maslach’s (1982) last recommendation in the work harder, not smarter category is to take things less personally. By this, she suggests stepping back from a client’s or patient’s problems and looking at the situation in more abstract or intellectual terms. This is not to be understood as becoming emotionally detached or cold. When the situation is objectified, emotional entanglement is less likely to occur (Maslach, 1982). Providers might prompt themselves, “their pain is their pain, not my pain” or keep their work at work and not bring it home, reliving it as they discuss their day with loved ones. This process is also consistent with the practice of mindfulness, which encourages moment-to-moment awareness and going through a process of observing and describing one’s experience in the moment (Strosahl, Robinson, & Gustavsson, 2012).

The second category, to care for oneself, as well as others, provides suggestions to help professionals keep themselves in shape, both physically and spiritually, as they are better capable of caring for others when in a good state of health. Six recommendations are provided within this category: accentuating the positive, know thyself, rest and relaxation, making the transition, a life of one’s own, and changing jobs.
Consistent with these recommendations, Freitas, Carneseca, Paiva, and Paiva (2014) conducted a study with palliative nursing staff in Brazil who participated in a workplace physical activity program over the course of 3 months. The participants spent 10 minutes per day, five days per week, engaged in the program with a physical education professional. Freitas et al. (2014) acknowledged several limitations to the study, including a small sample size and no control group; however, the intervention did appear to improve the participants rating of quality of life and a decrease in fatigue. Mood disorders, occupational stress, and burnout were not impacted by the intervention (Freitas et al., 2014). Despite the small sample size, their outcomes are supported by Shanafelt et al. (2010) who found surgeons who participated in aerobic and muscle condition exercises consistent with Center for Disease Control guidelines reported higher quality of life scores.

Rabiau, Knauper, and Miquelon (2006) in their compensatory health beliefs model suggest that individuals are attempting to balance the maximization of pleasure and minimization of harm. The authors recommend that when attempting to limit risk behaviors and to reinforce positive health behaviors, intervention is to facilitate the internalization of extrinsically-motivated health behaviors. This requires providing a meaningful rationale why health behaviors are important as well as promote a feeling of choice and opportunity to accept responsibility of the health behavior, followed by a sense of control over enacting the behavior, and to have a sense of being related to others (Rabiau et al., 2006).

The following are techniques suggested by Maslach (1982) to promote psychological and physical well-being and offset the costs of burnout. Her first suggestion is to accentuate the positive. This is accomplished by emphasizing what is
good, pleasant, or satisfying about working with others (Maslach, 1982). Professionals are also encouraged to pay attention to their accomplishments, both minor and major.

Some people have a tendency to reflect only on what went wrong during the day, which results in a negative bias and negative attributions to the work. Professionals might look for positives that have been previously overlooked or unrecognized. Professionals can actively elicit positive reactions by making things happen, not just waiting for something pleasant or positive to happen (Maslach, 1982). Making good things happen also encourages positive feedback, which can be validating and reinforce the motivations for engaging in the chosen profession. Feedback can be elicited by simple asking for it as opposed to waiting for a spontaneous disclosure. Asking how an intervention worked or helped can prompt positive feedback or offer ways to increase the efficacy of the intervention, increasing the likelihood of positive feedback in the future.

This recommendation is consistent with the concept of positive psychology. Positive psychology represents a shift from being preoccupied with only repairing the worst things to building positive qualities (Seligman & Csikszentmihalyi, 2000). It is important to recognize the positive aspects of work, which is consistent with organizational expectations that employees be proactive, take initiative, take responsibility for their professional development, and be committed to high quality performance (Bakker, et al., 2008). Shanafelt et al. (2010) also found that surgeons who emphasized finding meaning in their lives, focused on what is important in their life, maintained a positive outlook, and who embraced a balance between work and life were less likely to experience burnout.

Maslach’s (1982) second suggestion is to know thyself. Individuals tuned into their inner feelings are more likely to engage in coping strategies that counter-balance
burnout. In order to take action, the individual needs to be aware of what is felt and why. Maslach (1982) noted that therapists trained to recognize and deal with countertransference are better able to handle emotional exhaustion associated with burnout. Self-analysis can be conducted by expressing feelings verbally, journaling, or talking to supportive colleagues or friends. This analysis facilitates the articulation and shaping of vague or confusing feelings and can be cathartic. Self-observation through daily stress and tension logs is one way to conduct a self-analysis and develop insight into the inner state of being (Maslach, 1982). This self-observation should be conducted in constructive and not self-defeating manner as self-blame and self-victimization will be encouraged, leading to increased vulnerability to burnout.

In the spirit of self-observation, Erich Fromm (1989) writes of the need to be aware, awake, and to engage in self-analysis through a meditative process. One meditative process Fromm (1989) recommends is vipassana or mindfulness meditation from the Theravada Buddhist tradition. According to Fromm (1989) the aim of the meditation is “maximum awareness” of bodily and mental processes. Strosahl et al. (2012) describe one aspect of awareness as the ability to take perspective on self and self-story, termed in ACT as self-as-context. In ACT, this is an essential feature of developing psychological flexibility (Hayes, Strosahl, & Wilson, 1999).

Goodman and Schorling (2012) utilized a mindfulness-based intervention, based on Mindfulness-Based Stress Reduction (MBSR) to decrease burnout and increase well-being with healthcare providers. The intervention was conducted over eight weeks, and required a 2.5 hour weekly commitment, as well as participation in a seven hour retreat. The results of the intervention demonstrated a significant reduction in emotional exhaustion, depersonalization, and personal accomplishment, as measured by the
Maslach Burnout Inventory. Scores for mental well-being also improved significantly; however, there were no significant changes in physical health scores as measured by the SF-12v2 (Goodman & Schorling, 2012).

Asuero et al. (2014) worked specifically with primary health care professionals working in the public health system in Spain, using a mindfulness education program also based on MBSR. The results of their study demonstrated a large magnitude of change in mood disturbance and mindfulness, and moderate effects in regard to burnout and empathy. In addition to the pre/post-test changes, participants reported an increase in energy and activity, took more care of themselves, as well as improved communication and time-management skills (Asuero et al., 2014).

Maslach’s (1982) third suggestion is rest and relaxation. This recommendation addresses the effects of chronic stress over time. There are several physical symptoms associated with chronic stress which include: muscle tension, increased blood pressure, and stomach pains. Relaxation techniques and stress management can be utilized since burnout is an expression of chronic stress. Maslach (1982) notes there are various ways to engage in stress management, but practice of the techniques is essential to realize their benefits. Practice time needs to be scheduled within the day to ensure habit development. Maslach (1982) recommends that relaxation techniques be practiced during regularly scheduled breaks or just before stressful events, like presentations or evaluation sessions. She also warns that treating symptoms of stress does not address the underlying problems that are creating the stress and treatment of the underlying problem may require more time than a fifteen minute relaxation exercise. In a more recent study, Montero-Marín, Asún, Estrada-Marcén, Romero, and Asún (2013) found that a 10-minute stretching
exercise reduced anxiety and exhaustion symptoms and improved the mental and physical well-being of healthcare workers.

Her next recommendation “making the transition,” encourages the differentiation between work and home, leaving the stress and demands of work there, and not bringing them home (Maslach, 1982). To accomplish this, professionals are encouraged to decompress between work and home. Decompression is an activity that occurs between working and nonworking times and allows the individual to unwind, relax, and leave the job behind before engaging and being involved with family and friends (Maslach, 1982). These activities may be solitary and likely avoid mental exertion. Qualities including privacy and self-indulgence are more important than whether the activity involves exercise or rest or whether it is planned or spontaneous. Being alone is not a requirement. Socialization and solitude are both required when intervening with burnout. Some activities require companionship and being with others. Favorite hobbies or interests make excellent decompression activities.

Taking committed actions to value oriented behaviors can increase psychological flexibility and promote wellness (Hayes, et al., 1999). From an Acceptance and Commitment Therapy perspective, coping that creates an experience of avoiding can cause secondary harm to the individual (Hayes et al., 1999). This is termed experiential avoidance. When an individual engages only in avoidance strategies they tend to lead a life that is limited as they avoid opportunities to engage in their values out of fears associated with loss of self-esteem, self-worth, shame or guilt (Luoma, Hayes, & Walser, 2007).

Robinson et al. (2010) provide a set of interventions to help the healthcare practitioners clarify their mission and promote psychological flexibility. The
interventions aid in strengthening the connection to values; stepping back from thoughts, emotions, attitudes, memories, and sensations to identify unworkable rules; utilization of an observer self to identify self-limited stories; and the sustainment of actions consistent with identified values. The professionals then develop a burnout prevention and recovery plan used to promote health and well-being.

Bond and Bunce (2000) conducted a study on the effectiveness of work stress in a media organization in the United Kingdom. Their intervention consisted of two half-day workshops with a three month follow-up session. The results of the study indicated an improvement in general mental health, depression, and the participant’s ability to initiate innovations at work (Bond, 2004). Bond (2004) acknowledged the need to validate participant’s concerns about “toxic” work environments and that participants tend to be more open to the intervention when organizational interventions are running concurrently. He also noted that due to the empowerment and action emphasized by ACT and the removal of cognitive or emotional barriers to actions, participants tend to initiate organizational change themselves (Bond, 2004). Given the work demands of healthcare professionals, including maintaining shift coverage and spontaneous patient needs, the proposed intervention would be accessible throughout the day and each module completed within the time of a lunch break.

Mimura and Griffiths (2003) reviewed the effectiveness of workplace stress management approaches in the nursing profession. They reported that survey and retrospective studies were plentiful; however, randomized controlled trials and prospective cohort studies were rare. Due to the paucity research, it was concluded that there was evidence that personnel support was more effective than environmental
management. Of the studies reviewed, most had problems with population size and attrition, as well as placebos that were not neutral in their effect.

**Digital interventions.** In an editorial, Kraft and Yardley (2009) explored the future of digital interventions for health behavior change. The digital environment consists of the internet, mobile phones, smart phones, tablets, and personal computers. The authors noted the digital environment is an increasingly integral part of daily life (Kraft & Yardley, 2009). A meta-analysis of 75 studies provided support that digital interventions could be effective in health promotion; however, attrition rate is an obstacle for treatment completion.

Kraft and Yardley (2009) opined that motivation for continued use was a function of experienced utility and hope of future utility. There is evidence to suggest that tailored material and feedback increase engagement and program use. Timely monitoring, feedback, and demonstrated progress with a frame of reference, either against their own change plan or the progress of others in similar situations may help increase motivation through achievement (Kraft & Yardley, 2009). In addition to timely feedback, more elaborate interventions tended to be more effective. Interventions requiring more engagement with the intervention, for instance email, weekly modules, or online coaching or chat sessions, improved the emotional quality of the intervention. However, Kraft and Yardley (2009) noted that the extent and nature of interactivity for successful digital interventions had not been sufficiently investigated at the time.

More recently, Cowpertwait and Clarke (2013) conducted a meta-analysis on web-based psychological interventions for depression to evaluate the outcomes and to examine the moderating effects of the interventions. They reported a medium effect of web-based interventions versus controls, as well as a significant reduction in depression
and improvement in well-being. Cowpertwait and Clarke (2013) also found mean attrition rates were similar to face-to-face interventions, when moderated with human support and inclusion of reminders.

In March 2013, the National Center for Telehealth and Technology released a mobile application designed for use by military health care providers. The Provider Resilience application was developed to assist providers with productivity and emotional health and as a way to help them cope with burnout and compassion fatigue (PR Newswire. 2013, March 27). This app provides a resilience rating based on four measurements. This first measurement is a rest and relaxation clock, the second is a burnout assessment, the third is a professional quality of life assessment, and the fourth measurement is derived from “builders and killers” of resilience (PR Newswire. 2013, March 27). In addition to the measurements, the app utilizes a toolbox with resources including educational videos, inspirational cards, testimonies from other users, and stretching exercises.

The Navel Center for Combat and Operational Stress Control has also developed an iPad application, Stress Resilience Training System (SRTS), to assist in stress management. The SRTS provides biofeedback through a heart rate monitor connected to an iPad. The app also provides “know-how” information, techniques (deep breathing and muscle relaxation), games, and a review feature to track progress (Military, 2013). Unfortunately, despite the innovation of using mobile applications, the author was unable to locate any studies to support the efficacy of either Provider Resilience or SRTS apps.

Ly, Asplund, and Andersson (2014) reported an acceptance and commitment therapy-based smartphone application imparted small to moderate effects on stress management for middle managers working in corporations with >50 employees in
Sweden. Their intervention was conducted over six weeks and consisted of a step-by-step behavior program with six psychoeducational modules, one for each week (Ly et al., 2014). The purpose of the intervention was to educate the participants on how to handle their stress using ACT’s six basic principles and to help the participants accomplish small exercises (Ly et al., 2014). Each module consisted of a short audio lecture (approximately 4-6 minutes), 2-3 texts and 2–4 exercises and participants were encouraged to spend approximately 15 minutes per day on the application (Ly et al., 2014).

The application provided the participants the opportunity to write short reflections and rate their experience on a scale of 1-5. In addition, a back-end system collected data and sent the information to a website accessible to a therapist who would provide feedback through a text message system (Ly et al., 2014). In terms of attrition, 74 participants had been randomized. One participant later decided not to participate in the study and five out of the remaining 73 participants (6.8%) did not provide post-treatment data. Ly et al. (2014) defined treatment adherence to the program as a minimum of two registered activities in the application each week. Inactive and active weeks were mixed and more common than participants to completely stop being active. Of the 36 participants in the treatment group, 16 (44%) adhered to the intervention all the six weeks (Ly et al., 2014).

One possible solution to providing feedback and increasing intervention engagement is gamification. Gamification is the utilization of game design and mechanics in non-game contexts. Applications using gamification concepts may have built-in rewards for activities or provide the opportunity to compete against friends, as well as a way to increase employee recognition and engagement (Lanciault, 2014).
Lanciault (2014) writes that gamification is a creative process that can be tailored to organizations to address issues including: burnout, absenteeism, and high turnover rates. Gamification may be one strategy to help employees identify with the vision and culture of the organization. He writes this process can be started with providing rewarding experiences, which would promote happiness thereby positively affecting loyalty and productivity (Lanciault, 2014). Lanciault (2014) also posits a company can increase engagement by providing opportunities to earn virtual trophies or virtual points, which can be used to bid on products in online auctions to promote healthy competition between employees as their increased engagement is being recognized and rewarded.
Chapter 3: Methods

A review of the literature was completed in order to form a deeper understanding of burnout, work engagement, and interventions associated with the two constructs. The aim of the literature review was to synthesize the available literature and make inductive conclusions from the analysis of the literature to develop a proposal for a web-based intervention.

Literature Search

The literature review was conducted by doing searches on Academic Search Complete, the Wright State University card catalog, and the OhioLINK card catalog. All available databases were searched on Academic Search Complete, relevant databases included: Alt HealthWatch, Applied Science & Technology Full Text, ERIC, Health Source – Consumer and Nursing/Academic Editions, MEDLINE with Full Text, Psychology and Behavioral Sciences Collection, PsycINFO, PsycTESTS, Social Work Abstracts, SocINDEX with Full Text, and Vocational and Career Collection, using the following terms: “burnout,” “work engagement,” “well-being,” “wellness,” and “work stress,” as well as “hardiness,” and “resilience.” The following combination of terms was also employed during the literature search: “work engagement burnout,” “burnout healthcare,” “burnout and primary care,” “burnout interventions,” “work engagement interventions,” “resilience app,” “burnout app,” and “burnout prevention.” The search terms “burnout app” yielded only 12 results and none of the results were studies from peer reviewed academic journals. The search term “resilience app” yielded 109 results, however, only 56 results were from academic journals.
Additional articles, including seminal articles and sources, were acquired by reviewing the reference sections of articles and books found during the Academic Search Complete search. In addition to conducting searches on academic databases, searches on commercial sites, like Google Play and Apple’s App Store were also conducted. Using the search term “resilience” on Google Play, the author found 52 apps that were related to developing personal resilience, wellness, meditation, mindfulness, or mental fitness.
Chapter 4: FACT-WEB

Focused Acceptance and Commitment Therapy for Work Engagement and Burnout

Developing the Intervention

There are several factors to consider when evaluating the models of burnout and interventions to alleviate or prevent burnout within healthcare settings. These settings present barriers on both the individual and organizational levels. Professionals are expected to be experts and may feel pressure to refrain from asking for help. Healthcare settings generally, and primary care specifically, operate at a fast pace, with patient appointments scheduled in 15 minute intervals. Professionals also need to keep up with the corresponding paperwork associated with those patients to satisfy both governmental regulations and insurance policies. Consequently, an intervention for healthcare professionals needs to be brief, convenient, and sensitive to needs of the client utilizing it. This intervention combines Focused Acceptance and Commitment Therapy (FACT) with the three phases of Stress Inoculation Training (SIT) to promote work engagement and address burnout.

In 2010, Robinson et al. proposed a process to improve job satisfaction in primary care providers. In 2012, Strosahl et al. proposed a brief intervention model of Acceptance and Commitment Therapy, which they termed Focused Acceptance and Commitment Therapy (FACT). In 2013, Lloyd, Bond and Flaxman, using an ACT treatment, identified psychological flexibility as a mediator to emotional exhaustion and thereby a prevention for depersonalization. Lloyd et al. (2013) noted that strain, which is synonymous with emotional exhaustion, had decreased significantly; however,
psychological flexibility was not indicated as a mediator for the decrease in strain. Lloyd et al. (2013) also found that reductions in emotional exhaustion and depersonalization were maintained even after increases in psychological flexibility ceased.

Stress Inoculation Training is easily tailored to the setting where it will be utilized and has been used successfully in many settings (Meichenbaum, 1985). Freedy and Hobfoll (2007) used the Conservation of Resources stress model with a SIT protocol as an intervention for burnout. The results of the intervention demonstrated improvement in both social support and mastery (Freedy & Hobfoll, 1989). In their review of psychosocial interventions for burnout, Czabała, Charzyńska and Mroziak (2011) postulated that SIT is one of the most promising treatments. Czabała et al. (2011) also found evidence of the effectiveness of SIT for stress management when augmented with cognitive-behavioral techniques.

Focused Acceptance and Commitment Therapy for Work Engagement and Burnout (FACT-WEB) is a brief, digital intervention that marries the cognitive-behavioral techniques of ACT with a SIT framework designed with healthcare professionals in mind. Conceptualizations are provided for burnout, openness, awareness, and engagement. The conceptualizations are followed by sections for skill acquisition and rehearsal to reinforce the conceptualizations, and then an application and follow-through of the skills within the healthcare setting to provide in vivo practice and reinforcement of the skills.

The aim of the intervention is to increase psychological flexibility as defined by Hayes et al. (1999). This is achieved by increasing awareness of how each provider is experiencing inherent work stressors and how their thoughts and behaviors are contributing to their stress. Acceptance of and openness to the distressing experience is
encouraged and developed as attempts to control distressing experiences often lead to increased suffering and decreased psychological flexibility. Providers will concurrently be encouraged to reconnect with the values that inspired their professional choice and optimally will increase their engagement in meaningful, values-based, activities. This is supportive of the constructs of dedication and vigor in work engagement theory.

**Intervention Modules**

Each module is formatted in three sections, paralleling the three stages of SIT (Meichenbaum, 1985). The modules consist of a conceptualization section, a skills acquisition and rehearsal section, and an application and follow-through section which will provide a “homework” exercise to perform for the week (see Appendix G). Participants are encouraged to spend a week rehearsing the skills from each module; however, each module will be self-paced and allow participants to complete all three modules in one sitting, if they so choose. The information in each module will contain succinct information that can be read within a 15 minute time span. Upon completion of each module participants will be asked to provide the frequency and duration of skill rehearsals, as well as the frequency of in vivo skill application (see Appendix H, Module Scripts).

**Module 1.** Two concepts are presented in Module 1. The first is burnout along with its corresponding components. Risk factors are also illustrated to help prompt an emotional reaction and initiate motivation to change. The second concept is workability of coping styles. In ACT, there is a core assumption that human behavior is purposeful; however, individuals are not sure where they are going (Strosahl et al., 2012). Therefore, it is important to clarify where in life they want to go and whether their current behaviors will lead them there. If their current coping style is not effective, then willingness to
engage in a new style or behavior must be evoked. A common coping strategy is to attempt to control or avoid unwanted experiences. In ACT, this is termed experiential avoidance (Hayes et al., 1999). When choosing to engage in avoidance, there is little room to make other choices. The intentions of this module are to illustrate the paradox of controlling emotions, as it often leads to more suffering, and for participants to begin thinking about their current life path as it pertains to work.

The values bull’s eye, developed by Robinson et al. (2010), is introduced to help participants come into contact with their values as they pertain to work life. Values were a common theme in the literature and were present even in Maslach’s (1982) original conception. Clarification of values may also serve to bolster dedication as it is conceptualized in work engagement theory. The values bull’s eye was developed for providers in primary care; however, in the module script (see Appendix H, Module 1) participants are invited to substitute out any of the provided quadrants with one their own.

The participants are indirectly introduced to mindfulness as a skill. They are asked to observe their experience by being a witness to how they react to stressors within the work place. The prompts also encourage being open to the experience and to not try to change or block it. Independent of ACT, mindfulness-based interventions have been shown to be effective in reducing burnout and increasing psychological well-being (Goodman & Schorling, 2012). Participants are instructed to apply the skill when they are actively experiencing stressors and encouraged to follow-through with the exercise without blocking or changing the experience.

**Module 2.** This module begins with a brief summary of the last module. The concept of mindfulness is introduced and the acronym TEAMS, created by Robinson et
al. (2010), is explained. The acronym TEAMS stands for thoughts, emotions, associations, memories and sensations. These personal events make up the inner experience of human beings and negative or distressing personal events tend to prompt experiential avoidance (Robinson et al., 2010). The intent of mindfulness practice is not to change or judge personal events and inner experience, but to carefully watch them and develop a deeper awareness of our own response patterns to these events (Kabat-Zinn, 1990). Mindfulness is supportive of absorption in work engagement as mindfulness encourages awareness and participation in the present moment. Although absorption has been characterized as getting lost in work, practitioners of mindfulness are encouraged to become fully aware of and embrace the present moment.

Unlike traditional cognitive-behavioral therapies, ACT does not directly attempt to change cognitions, but utilizes mindfulness to identify patterns that are unworkable or not performing their intended function (Hayes et al., 1999). It is assumed that associations cannot be changed; however, new associations can be created and reinforced and over time old associations become behaviorally extinct (Hayes et al., 1999).

After the concept of mindfulness is described through the TEAMS acronym, the participants are introduced to three skills. The first is to sit mindfully by witnessing their experience of their TEAMS. Mindfulness has been linked with a decrease in burnout and improved well-being in healthcare providers (Matthew & John, 2012). In Kabat-Zinn’s (1990) Mindfulness-Based Stress Reduction Program (MBSR), participants engage in mindfulness exercises for 40 minutes a day, six days a week for the duration of the eight week program. Klatt, Buckworth, and Malarkey (2009) found a therapeutic effect with only 20 minutes of mindfulness practice. Strosahl et al. (2012) postulate that even small behavior changes can have a large impact. Given the context of healthcare settings and a
typical routine of 15 minute appointments, the module script encourages participants to practice the mindfulness exercise for approximately seven minutes.

The second skill is based on an exercise called emotion exposure. Meuret, Twohig, Rosenfield, Hayes, and Craske (2012) found evidence that a brief ACT intervention combined with exposure therapy had a large effect size for reducing panic. The exercise in the module does not use the same procedures as Meuret et al. (2012); however, the script is derived from the same theories and techniques. This skill encourages participants to identify a problematic emotion and invites them to observe the emotion without acting on it, just to watch changes in the emotion as well as any transitions to new emotions. Participants are asked to practice this skill for approximately seven minutes a day.

The third skill set is called thought defusion. According to ACT, cognitive fusion occurs when an individual has fused with a verbal label and treats it as a matter of their essence and identity (Hayes, Strosahl, & Wilson, 1999). For example, someone might say “I am depressed” versus saying “I am a person who is having a feeling called ‘depression’ at this moment.” Defusion conversely is the process of helping the individual recognize thoughts only as mental events, not facts or defining characteristics of themselves. The exercises are intended to help participants recognize thoughts as mental events and also let go of distressing or persistent thoughts. The skills include watching, labelling, and letting go of thoughts.

Participants are asked to apply the first two skills for approximately 14 minutes a day and to spend a few moments a day practicing skills to promote defusion for an accumulated commitment of 15 minutes of practice per day. This is consistent with workflow in healthcare settings. Many workplaces offer two 15 minute breaks per day,
as well as a minimum of 30 minutes for lunch. These exercises could be easily integrated within multiple points of the work day. The challenge arises when toxic work environments cultivate habits like working through lunch or skipping breaks to complete paperwork. The inherent nature of these skills require in vivo application. A participant cannot be practicing these skills without directly experiencing their personal events.

**Module 3.** The last module provides a brief recap of the previous modules and reintroduces the values bull’s eye. Participants are encouraged to reflect upon their values and what called them to the profession. Combining the practices of acceptance and mindfulness with a commitment to behaviors that are consistent with values helps professionals respond to daily challenges with thoughtfulness and positive energy (Robinson et al., 2010). This module strongly emphasizes the application and follow-through phase of SIT. Participants are tasked with engaging in behaviors in alignment with the values identified on their bull’s eye.

A willingness to experiment and work through barriers, such as negative or unpleasant TEAMS is encouraged as they make value-consistent actions. A metaphor of experiencing the pinch of a shot in order to experience the benefit of vaccination is used to illustrate the need to experience some discomfort in order to experience the benefits of inoculation. Taking successful steps towards values also builds a sense of personal accomplishment and self-efficacy, which may bolster vigor as well as renew a sense of dedication. In addition to working on the values identified in Module 1, participants are asked to consider increasing healthful habits, which enhance resiliency and protect against burnout (Edmonstone, 2013; Awa et al., 2010; Carson, 1993; Freitas et al., 2014), and to take actions that may improve any toxicity within the work environment.
The final activity of the module is the development of a burnout and recovery plan. The plan was developed by Robinson et al. (2010). Participants are asked to specify behaviors to be implemented, when they will be used, and how frequently they will be implemented for each quadrant of the bull’s eye. In addition, participants are asked to develop strategies to practice acceptance, mindfulness, staying in contact with their values, and taking value-consistent actions daily (Robinson et al., 2010). This last activity will require the integration of concepts and skills acquired in the previous modules, as it will be left to the providers to recognize areas of growth and barriers to making actions consistent with their values.

**Intervention Evaluation**

When piloting the intervention, healthcare organizations would find the following measures helpful. Participants in the intervention may anonymously complete an assessment battery through LimeSurvey. LimeSurvey is a free, online, open source survey tool. The assessment battery would include the following instruments: demographics questionnaire, the Acceptance and Action Questionnaire II, the Five Factor Mindfulness Questionnaire (FFMQ), the Oldenburg Burnout Inventory (OLBI), the Utrecht Work Engagement Scale (UWES) and the Wellness Assessment Tool (WAT).

All the measures rely on self-report and utilize a Likert-type scale to measure their respective constructs. It is expected the measures will take approximately 20 minutes to complete. Organizational information including attendance, patient complaints, and number of critical incident reports may also be obtained prior to the intervention, three weeks after initiation of the intervention, and three months after the conclusion of the intervention to evaluate the impact of the intervention.
Basic demographics (see Appendix A) should be obtained from the participants, including age, race, gender, marital status, religious/spiritual preferences, years in current position, level of education, income range, as well as their general position titles (Receptionist, Scheduler, Nurse, Physician (Resident, Preceptor, etc.), Billing, Records, Administration, Physician’s Assistant, Pharmacist, Radiologist, etc. This information could be utilized to see what populations within the organization experienced the most burnout, demonstrated work engagement, and benefitted from the intervention.

The Acceptance and Action Questionnaire II (AAQ-II) was designed to assess the constructs identified as acceptance, experiential avoidance, and psychological inflexibility (see Appendix B). The measure consists of seven questions utilizing a 7-point Likert scale. The mean alpha coefficient is .84 (.78 - .88), and the 3 and 12 month test-retest reliability is .81 and .79, respectively. Results indicate that AAQ-II scores concurrently, longitudinally, and incrementally predict a range of outcomes, from mental health to work absence rates. This was consistent with its underlying theory. The AAQ-II also demonstrates appropriate discriminant validity. The AAQ-II appears to measure the same concept as the AAQ-I (r = .97), but with better psychometric consistency.

The Five Factor Mindfulness Questionnaire (FFMQ) was based on a factor analytic study of five independently developed mindfulness questionnaires (Baer et al., 2006; see Appendix C). The analysis yielded five factors that appear to represent elements of mindfulness as it is currently conceptualized. Participants rate each question from “never or very rarely true” to “very often or always true.” The questionnaire measures nonreactivity to inner experience, characterized by the statement “I perceive my feelings and emotions without having to react to them” (Baer et al., 2006, p. 34), observation and attendance to thoughts, feelings, and sensations, description and labeling
of experiences with words, acting with awareness versus being on “autopilot,” and non-judgment of experience, which is characterized by the statement, “I make judgments about whether my thoughts are good or bad” (Baer et al., 2006, p. 35). The short form (FFMQ-SF) version consists of 24 questions measuring the same five variables on a 5-point Likert scale (Bohlmeijer, ten Klooster, Fledderus, Veehof, & Baer, 2011).

Although the Maslach Burnout Inventory (MBI) is the most commonly used measurement of burnout and has strong construct validity and reliability, the Oldenburg Burnout Inventory (OLBI) was selected for the proposed intervention (see Appendix D). The MBI measures an individual’s level of burnout on three scales. Those scales include: emotional exhaustion which measures feelings of being emotionally overextended and exhausted by one's work. The depersonalization scale measures an unfeeling and impersonal response toward the recipient of services by that individual, and lastly, the personal accomplishment scale which measures feelings of competence and achievement within the workplace (Maslach & Jackson, 1981). The OLBI measures only emotional exhaustion and depersonalization, which have been identified as the core features of burnout (Green, Walkey, & Taylor, 1991; Demerouti & Bakker, 2008). Consequently, the OLBI is shorter which lessens the participant’s response burden. In addition, the OLBI is freely available through the public domain, unlike the MBI, which is only commercially available (Poulsen, Poulsen, Khan, Poulsen, & Khan, 2011).

The Utrecht Work Engagement Scale (UWES) is a brief measure consisting of nine questions on a 6-point Likert-scale ranging from 0 “never” to 6 “everyday” (see Appendix E). Despite the three dimensional construction of the UWES to identify vigor, dedication, and absorption, the total score is the best indicator of work engagement
(Schaufeli & Bakker, 2010). The UWES has an internal consistency that exceeds .80 with a Cronbach’s α over .90 for the composite score (Schaufeli & Bakker, 2010).

The Wellness Assessment Tool (WAT) developed by Murphy and Moller (1996) measures four dimensions which include: health, environment/interpersonal relationships, spiritual, and attitudes/behavior (see Appendix F). The form consists of 40 questions and utilizes a 4-point Likert-scale. Participants are asked to rate the percentage of time spent on the activity described, where 1 corresponds to less than 25% of the time, 2 corresponds to 25-49% of the time, 3 corresponds to 50-74% of the time, and 4 corresponds to 75-100% of the time (Rice & Moller, 2006).

Lastly, it is recommended that participants of the intervention be provided an opportunity to give constructive feedback as a way to mitigate the drop-out rate for future digital interventions (see Appendix I, Intervention Feedback). In a meta-analysis of web-based interventions for depression, Cowpertwait and Clarke (2013) reported that drop-out rates can range from 1-50%. They reported a mean drop-out rate of 33%. Therefore, it is important to solicit feedback to address unforeseen problems with the implementation of the intervention and to address attrition and drop-out rates.
Chapter 5: Discussion

As in any program development, the importance in identifying limitations and suggestions for future interventions is essential to remain responsive to changes needed and promotion of program improvement. The following sections will identify limitations to this digital intervention as well as provide suggestions for future implications regarding new developments in either theory or technology.

Limitations

In spite of being grounded in empirically supported theory, there are limitations to the proposed intervention which require acknowledgement. First, the intervention has not been piloted and consequently there is no statistical data to support the efficacy or validity of the intervention. However, conceptually it is driven by current empirical evidence with the academic literature.

Second, this intervention targets change on the individual level whereas a high systems approach would yield the highest results individually and organizationally. The survey software utilized by the intervention, although easily adapted to an individual level intervention, is not sophisticated enough to also incorporate tools to advance changes on an organizational level. In an effort to address this inherent weakness, participants are asked to consider taking actions that might influence or improve a toxic work environment.

Lastly, this intervention relies on LimeSurvey, a text-based software program which limits accessibility for individuals who may be visually impaired. LimeSurvey is
web-based and can be accessed by mobile devices; however, it has a simple interface that limits functionality. Information from the intervention could be presented easily to the participants, but the interface is not engaging. A mobile application, with a more sophisticated graphic interface, the ability to provide audio and video content, and enhanced social networking options would be better suited to providing either an individual or high systems intervention. Due to their sophistication, mobile applications require longer programming times and must be programmed across multiple platforms (i.e. iOS and android) to reach most consumers.

**Future Implications**

There are several implications that require consideration. The conceptualization of work engagement is expanding as more research occurs in the field. As a relatively new concept, there is currently no consensus on the meaning of the concept and its relationship to burnout (Bakker & Leiter, 2010). Researchers are unclear on the stability of work engagement, which may be a daily or even moment-to-moment phenomena. Personal factors may also influence engagement, therefore attention to the trainability of engagement would also be beneficial (Bakker & Leiter, 2010). Resilience and hardiness have been studied in regard to providing protective factors for burnout, but little has been done in regard to their influence on work engagement.

The healthcare industry is also in a state of flux. With the implementation of the Affordable Care Act, there has been an increase in the utilization of services. There is also an industry trend to reintegrate behavioral health into primary care models of treatment. This reintegration will influence how services are provided as well as how different specialties work with each other. It would be important to be sensitive to
additional strains to the system as an additional dimension is added to an already stressful system.

An additional dimension that requires further exploration is identifying the barriers to healthcare professionals receiving treatment of their own. It would be important to consider attitudes such as, “do as we say, not as we do” or the pressure of being the “expert” with the implicit message that experts “shouldn’t” need help.

Healthcare professionals often put other’s needs above their own and consequently do not prioritize their own health (Maslach, 1982). There may be perceived stigma associated with healthcare providers who require either medical or mental health care and the consequence may be resistance to seeking out treatment. These barriers, as well as environmental factors such as securing time off or ensuring shift coverage, may reduce proactive efforts to obtain treatment or influence participation.

Technology is constantly improving and increasingly becoming more integrated within society and our lives. Advances in technology have provided unprecedented access to information. Future possibilities for digital interventions to improve work engagement or reduce burnout might implement mechanisms to prompt or promote organizational level changes. Digital interventions offer the opportunity to provide instant, autonomous feedback, enhanced networking, and a cost-effective means to disburse information. This connectivity could provide timely feedback to administrators and enable timely responses to organization factors damaging to the work environment.

The ease of development is also improving. At one point in time only programmers could make websites. Now templates are readily available and easy enough for individuals with basic computer literacy to build their own website. The same may be true for mobile applications. In addition, consideration needs to be given to the
incorporation of gamification concepts within interventions to improve participation and efficacy, as well as decrease attrition.

**Conclusion**

Employment within the healthcare settings is demanding work due to the competing interests of the patients, policy makers, and clinicians. Although many professionals enter this sector of work with high aspirations to improve the lives of others, the demands from high provider to patient ratios, prolonged exposure to patients experiencing suffering, and the increasing amount of clinical documentation required from policy-makers, ultimately lead to emotional exhaustion, cynicism, and detachment.

Burnout is an ongoing and increasing problem capable of ending with disastrous consequences as severe as suicide. Early career professionals and individuals who are the most dedicated and enthusiastic are at the highest risk for burnout. There are also mitigating factors associated with several diversity variables. In addition to young professionals, women and individuals from collectivist cultures may be at a higher risk for burnout. Organizational administrators need to be aware of the shifting demographics of healthcare professionals and consider how the organizational culture can promote either work engagement or burnout.

The predominant mode of intervention for burnout has been at the individual level, in the form of didactics for stress management. There are many systemic challenges associated with the implementation of organizational-level interventions including the difficulty of designing randomized controlled trials, complexity of variables, cost, and administrative resistance to these interventions; which may account for the paucity of research in this area. Research is still required in this domain of burnout and work engagement interventions.
This program provides an alternative intervention that provides anonymity and is sensitive to the time demands of healthcare professionals. Although the program utilizes a cognitive-behavior framework, in the form of Focused Acceptance and Commitment Therapy, its components are consistent with positive psychology, are strength-based, and encourage both work engagement and reduction in burnout symptoms.
Appendix A: Demographics

The following questions ask for you to provide a wide range of information about yourself. We ask that you be as honest as possible throughout the survey. All information will remain confidential.

1. What is your age? __________

2. What is your gender? ____ Male ____ Female ____ Transgender

3. What is your race? ____ African American ____ Asian ____ Caucasian ____ Hispanic or Latino/a ____ American Indian or Alaska Native ____ Bi-Racial ____ Native American ____ Pacific Islander ____ Other

4. What is your marital status? ____ Single ____ Cohabitating with a Partner ____ Married ____ Separated ____ Divorced ____ Widowed

5. What is the highest grade or year you finished and got credit for in regular school or college? ____ Less than grade school (8th grade) ____ Some high school (between grades 8-11) ____ High school graduate ____ One or two years of college ____ Three to four years of college ____ College graduate ____ Post-Graduate Education

6. What is your employment status at the present time? ____ Employed full-time ____ Employed part-time

7. How many hours do you work each week? Hours/week __________

8. How long have you been employed with the present company? __________

9. What is your job title? __________________

10. How long have you been employed in this current position? __________

11. How many times during the past year have you visited a doctor because of illness? (Do not include dentists or eye doctors.) Number of visits __________

12. How many times during the past year have you visited a doctor for a general checkup? That is, not because of a specific illness or condition? (Do not include dentists or eye doctors.) Number of checkups __________

13. During the past year, how many days of work have you missed because of illness? Days of work missed __________
## Appendix B: Acceptance & Action Questionnaire - II

### AAQ-II

Below you will find a list of statements. Please rate how true each statement is for you by circling a number next to it. Use the scale below to make your choice.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>never true</td>
<td>very seldom true</td>
<td>seldom true</td>
<td>sometimes true</td>
<td>frequently true</td>
<td>almost always true</td>
<td>always true</td>
</tr>
</tbody>
</table>

1. My painful experiences and memories make it difficult for me to live a life that I would value.  
2. I’m afraid of my feelings.  
3. I worry about not being able to control my worries and feelings.  
4. My painful memories prevent me from having a fulfilling life.  
5. Emotions cause problems in my life.  
6. It seems like most people are handling their lives better than I am.  
7. Worries get in the way of my success.

This is a one-factor measure of psychological inflexibility, or experiential avoidance. Score the scale by summing the seven items. Higher scores equal greater levels of psychological inflexibility.

Appendix C: Five Facet Mindfulness Questionnaire – Short Form

5 facet questionnaire: short form (ffmq-sf)

Below is a collection of statements about your everyday experience. Using the 1–5 scale below, please indicate, in the box to the right of each statement, how frequently or infrequently you have had each experience in the last month (or other agreed time period). Please answer according to what really reflects your experience rather than what you think your experience should be.

<table>
<thead>
<tr>
<th></th>
<th>never or very rarely true</th>
<th>not often true</th>
<th>sometimes true</th>
<th>often true</th>
<th>very often or always true</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I’m good at finding the words to describe my feelings</td>
<td>DS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I can easily put my beliefs, opinions, and expectations into words</td>
<td>DS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I watch my feelings without getting carried away by them</td>
<td>NR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I tell myself that I shouldn’t be feeling the way I’m feeling</td>
<td>/NJ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>it’s hard for me to find the words to describe what I’m thinking</td>
<td>/DS</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 6 | I pay attention to physical experiences,  
such as the wind in my hair or sun on my face | OB | |
| 7 | I make judgments about whether my thoughts are good or bad. | /NJ | |
| 8 | I find it difficult to stay focused on what’s happening in the present moment | /AA | |
| 9 | when I have distressing thoughts or images,  
I don’t let myself be carried away by them | NR | |
<table>
<thead>
<tr>
<th></th>
<th>generally, I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing</th>
<th>OB</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>when I feel something in my body, it’s hard for me to find the right words to describe it</td>
<td>/DS</td>
</tr>
<tr>
<td>12</td>
<td>it seems I am “running on automatic” without much awareness of what I’m doing</td>
<td>/AA</td>
</tr>
<tr>
<td>13</td>
<td>when I have distressing thoughts or images, I feel calm soon after</td>
<td>NR</td>
</tr>
<tr>
<td>14</td>
<td>I tell myself I shouldn’t be thinking the way I’m thinking</td>
<td>/NJ</td>
</tr>
<tr>
<td>15</td>
<td>I notice the smells and aromas of things</td>
<td>OB</td>
</tr>
<tr>
<td>16</td>
<td>even when I’m feeling terribly upset, I can find a way to put it into words</td>
<td>DS</td>
</tr>
<tr>
<td>17</td>
<td>I rush through activities without being really attentive to them</td>
<td>/AA</td>
</tr>
<tr>
<td>18</td>
<td>usually when I have distressing thoughts or images I can just notice them without reacting</td>
<td>NR</td>
</tr>
</tbody>
</table>

**PTO.**

<table>
<thead>
<tr>
<th>never or very rarely true</th>
<th>not often true</th>
<th>sometimes true</th>
<th>sometimes not true</th>
<th>often true</th>
<th>very often or always true</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
I think some of my emotions are bad or inappropriate and I shouldn’t feel them

I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow

when I have distressing thoughts or images, I just notice them and let them go

I do jobs or tasks automatically without being aware of what I’m doing

I find myself doing things without paying attention

I disapprove of myself when I have illogical ideas

---

correct scores for items preceded by a slash (/NJ, /AA, etc) by subtracting from 6

non react = ; observe = ; act aware = ; describe = ; non judge =

In the research study where the short form of the FFMQ was developed (see Bohlmeijer et al. below), most of the 376 participants were educated women with “clinically relevant symptoms of depression and anxiety.” They were randomized to a nine week clinical intervention involving an Acceptance & Commitment Therapy (ACT) self-help book “Living life to the full,” plus 10 to 15 minutes per day of Mindfulness-Based Stress Reduction meditation exercises, plus some email support. Mean (and Standard Deviation) scores pre- and post-intervention were:

<table>
<thead>
<tr>
<th></th>
<th>non react</th>
<th>observe</th>
<th>act aware</th>
<th>describe</th>
<th>non judge</th>
</tr>
</thead>
<tbody>
<tr>
<td>pre-</td>
<td>13.47 (3.07)</td>
<td>13.86 (3.21)</td>
<td>13.19 (3.32)</td>
<td>16.28 (3.91)</td>
<td>14.09 (3.63)</td>
</tr>
<tr>
<td>mean (sd)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>~70%</td>
<td>10.4–16.5</td>
<td>10.6–17.0</td>
<td>9.9–16.6</td>
<td>12.4–20.2</td>
<td>10.5–17.7</td>
</tr>
<tr>
<td>~95%</td>
<td>7.3–19.6</td>
<td>7.4–20.3</td>
<td>6.5–19.8</td>
<td>8.5–24.1</td>
<td>6.8–21.3</td>
</tr>
<tr>
<td>post-intervention</td>
<td>16.90</td>
<td>15.22</td>
<td>15.98</td>
<td>18.46</td>
<td>18.14</td>
</tr>
</tbody>
</table>

Bohlmeijer, E., P. M. ten Klooster, et al. (2011). "Psychometric properties of the five facet mindfulness questionnaire in depressed adults and development of a short form." Assessment 18(3): 308-320. In recent years, there has been a growing interest in therapies that include the learning of mindfulness skills. The 39-item Five Facet Mindfulness Questionnaire (FFMQ) has been developed as a reliable and valid comprehensive instrument for assessing different aspects of mindfulness in community and student samples. In this study, the psychometric properties of the Dutch FFMQ were assessed in a sample of 376 adults with clinically relevant symptoms of depression and anxiety. Construct validity was examined with confirmatory factor analyses and by relating the FFMQ to measures of psychological symptoms, well-being, experiential avoidance, and the personality factors neuroticism and openness to experience. In addition, a 24-item short form of the FFMQ (FFMQ-SF) was developed and assessed in the same sample and cross-validated in an independent sample of patients with fibromyalgia. Confirmatory factor analyses showed acceptable model fit for a correlated five-factor structure of the FFMQ and good model fit for the structure of the FFMQ-SF. The replicability of the five-factor structure of the FFMQ-SF was confirmed in the fibromyalgia sample. Both instruments proved highly sensitive to change. It is concluded that both the FFMQ and the FFMQ-SF are reliable and valid instruments for use in adults with clinically relevant symptoms of depression and anxiety.
Appendix D: Oldenburg Burnout Inventory

Oldenburg Burnout Inventory

Instruction: Below you find a series of statements with which you may agree or disagree. Using the scale, please indicate the degree of your agreement by selecting the number that corresponds with each statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I always find new and interesting aspects in my work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. There are days when I feel tired before I arrive at work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. It happens more and more often that I talk about my work in a negative way.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. After work, I tend to need more time than in the past in order to relax and feel better.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. I can tolerate the pressure of my work very well.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. Lately, I tend to think less at work and do my job almost mechanically.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. I find my work to be a positive challenge.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. During my work, I often feel emotionally drained.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. Over time, one can become disconnected from this type of work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. After working, I have enough energy for my leisure activities.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. Sometimes I feel sickened by my work tasks.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. After my work, I usually feel worn out and weary.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. This is the only type of work that I can imagine myself doing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. Usually, I can manage the amount of my work well.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. I feel more and more engaged in my work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. When I work, I usually feel energized.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Note. Disengagement items are 1, 3(R), 6(R), 7, 9(R), 11(R), 13, 15. Exhaustion items are 2(R), 4(R), 5, 8(R), 10, 12(R), 14, 16. (R) means reversed item when the scores should be such that higher scores indicate more burnout.
Appendix E: Utrecht Work Engagement Scale

Work & Well-being Survey (UWES) ©

The following 9 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the “0” (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>A few times a year</td>
<td>Once a month or less</td>
<td>A few times a month</td>
<td>Once a week</td>
<td>A few times a week</td>
<td>Every day</td>
</tr>
</tbody>
</table>

1. _______ At my work, I feel bursting with energy
2. _______ At my job, I feel strong and vigorous
3. _______ I am enthusiastic about my job
4. _______ My job inspires me
5. _______ When I get up in the morning, I feel like going to work
6. _______ I feel happy when I am working intensely
7. _______ I am proud of the work that I do
8. _______ I am immersed in my work
9. _______ I get carried away when I’m working

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Appendix F: Wellness Assessment Tool

WELLNESS ASSESSMENT TOOL

Instructions and key: Circle the number below that most applies. 1= less than 25% of the time, 2= 25-49% of the time, 3= 50-74% of the time, 4= 75-100% of the time.

HEALTH

1 2 3 4 1. I exercise for 30 to 60 minutes a day

1 2 3 4 2. I eat a nutritious diet (Minimum five servings fresh vegetables and fruit a day) and avoid chemicals, high fat content, and refined sugar

1 2 3 4 3. I try to keep all my body systems in balance. I take care of my hygiene everyday

1 2 3 4 4. I get 6 to 8 hours of undisturbed sleep a night

1 2 3 4 5. I do not use caffeine, alcohol, street drugs, or ephedrine.

1 2 3 4 6. It is easy for me to remember and to understand what I hear and read (my brain works right)

1 2 3 4 7. I am free from infections/illness

1 2 3 4 8. My hearing, seeing, feeling (touch), smelling and tasting work right.

1 2 3 4 9. I have the energy to do the things I want to do.

1 2 3 4 10. I use prescription drugs as prescribed.

HEALTH SCORE _______ (Total possible is 40)

ENVIRONMENT/INTERPERSONAL RELATIONSHIPS

1 2 3 4 11. I am satisfied with my performance at work/school

1 2 3 4 12. I try to learn something new everyday

1 2 3 4 13. I live in pleasant, surroundings
4 Life skills (survival skills) are easy for me. (This includes personal hygiene, care of residence, financial management and meal preparation.)

15 I have a positive, satisfying relationship with all members of my family

16 I am able to negotiate with important others in ways that satisfies all our needs.

17 I am satisfied with my income and ability to manage finances

18 I have at least three people who will help me out at anytime

19 The services I need are easily available to me

20 I do something nice for at least one person every day

ENVIRONMENT/INTERPERSONAL RELATIONSHIPS SCORE ______ (40 possible).

SPRITUAL

21 I pray or meditate daily.

22 I seek after truth.

23 I am able to forgive myself and others.

24 I acknowledge God as I understand Him to be.

25 I express thanks for each new day.

26 I spend at least 5 minutes a day reviewing how my faith affects my life

27 I am able to express and receive love from others.

28 I spend at least 10 minutes a day reading and/or listening to spiritual material

29 My spiritual/religious practices are a source of strength to me

30 I am satisfied with my level of spiritual health

SPIRITUAL SCORE _____ (Possible 40)
ATTITUDES/BEHAVIOR

1 2 3 4 31 I look forward to the new day
1 2 3 4 32 I have a successful program I follow to manage my wellness
1 2 3 4 33 I can deal effectively with the pain and pleasure in my life
1 2 3 4 34 I enjoy life
1 2 3 4 35 I feel I make a worthwhile contribution to society
1 2 3 4 36 I am able to express my love to others
1 2 3 4 37 I accept responsibility for my own behavior
1 2 3 4 38 I have a working action plan for success
1 2 3 4 39 I allow others to make their own choices
1 2 3 4 40 My life is in balance

ATTITUDES/BEHAVIOR SCORE ______ (Total possible 40)
TOTAL SCORE __________ (Total possible = 160)

1997 Millene Freeman Murphy and Mary D. Moller
## Appendix G: Module Components

### Module Sequencing, Topics, and Exercises

<table>
<thead>
<tr>
<th>Concept</th>
<th>Skill Acquisition &amp; Rehearsal</th>
<th>Application &amp; Follow-through</th>
</tr>
</thead>
</table>
| 1. Awareness of burnout & workability of coping styles | Consequences of controlling feelings of stress  
Break down of controlling stress  
Identify personal stress buttons  
Gather information and practice observing  
Signs & symptoms of work stress & burnout  
Create functional view of struggle and avoidance behaviors | Ask participants to respond to life path questions.  
Values clarification worksheet/bull’s eye  
Ask participants to monitor their experience of struggle and do nothing but observe their experience. |
| 2. Openness & awareness to distressing personal events | Mindfulness  
Taking observer, or self-as-context, perspective  
Able to detach from distressing private experience and associated rules.  
Able to take a nonjudgmental, accepting stance towards painful material.  
Able to experience the present moment.  
Able to take perspective on self and self-story. | Mindfulness exercises  
“Defusion” exercises  
Emotion exposure  
Guided imagery exercise inviting participants to place where they can observe painful experiences and learn to hold them more lightly. |
| 3. Engagement in value-consistent actions | Identify & strengthen connection to values Promote ability to make public commitments and learn from direct experience. Able to sustain values-consistent action Complete Bull’s-Eye Values Assessment | Track progress on Bull’s-Eye Values Assessment. Participants make intentional choices, pursue valued directions, practice self-compassion, and learn from their experiences. Increase healthy habits |
Module 1

Welcome! Thank you for participating in this brief intervention. You will be introduced to topics and skills to help you change how you experience stress at work. For optimal results, you are asked to apply and follow-through with the skills over the course of a week; however, you may work at your own pace.

Our first topic is burnout. Burnout is the experience of long-term exhaustion and the consequent decline of interest in formerly meaningful work activities.

There are three main components to burnout:

1. Emotional exhaustion: the experience of feeling emotionally drained and depleted due to excessive emotional demands.

2. Depersonalization: emotional distancing and feeling less connected to your patients.

3. Personal accomplishment: a feeling of being less competent in your work.

There are several risk factors for burnout:

- Loss of control in your environment (time pressures, paperwork, work hours, work flow, etc.).

- Increased responsibility for providing care to patients with complex problems and a simultaneous limitation of resources.
• Limited support from colleagues, partners, or friends (place more demands than the support they offer).

• Toxic work environments (decreased emphasis on quality, trust in organization is undermined, weak employee cohesiveness, values are inconsistent).

How do you react when someone asks you to calm down? What would you do if you were asked to fall in love with a random person off the street? Could you do it? Likely, if you were told to calm down you would get more angry or frustrated and it would be unlikely that you could force yourself to authentically love someone you did not know.

However, we tell ourselves to stop feeling a certain way, to just relax, or not to worry about it. Attempts to control our feelings or thoughts often result in more suffering. To this end, over the course of the intervention, you will be asked to observe and describe your experiences, but not to try and change them.

Over the course of the next week:

1. Identify those experiences at work that stress you out. What are you attempting to control, avoid, or get rid of?

2. Observe and describe to yourself how you experience those stressors.

3. What type of life would you choose if you could choose? What would bring more meaning to your life?

4. Ask yourself:

   a. What are the costs and benefits of pursuing control?

   b. What behaviors would tell you that you’re moving toward more meaning?
c. If you get stuck, how would you help yourself to keep moving forward?

d. Who or what helps you move in the direction of more meaning?

5. How close are you to the center of the bull’s eye? If there is a domain on the bull’s eye that does not reflect one of your values, what would you replace it with? How close are you to your mark?

6. When you are confronted by your stressors (and it will happen) try to challenge yourself to not control your inner experience, just witness what it is like to have the experience without trying to change it.

Module 2
In the last module, you were introduced to the concept of burnout and asked to identify things that stress you out at work. You were also asked to consider what you value and how consistent your work life is to those values.

This module is an invitation to become more open and aware of your personal experience, which consists of these internal events: thoughts, emotions, associations, memories, and sensations (TEAMS). You are invited to be open to your experience of both the positive and negative (distressing) personal events and TEAMS that are part of your daily experience. It may be helpful to visualize yourself as a stream bed that holds the constant flow of TEAMS that make up your lived experience. The stream bed is shaped and influenced by the flow, but is separate from the stream of experience. You are capable of holding the flow of personal experience, even when the stream swells or becomes rough.

- Thoughts: develop along with language acquisition and words, and as part of language acquisition, they are often paired with objects or experiences. There is a tendency to assume thoughts are facts; however, you are encouraged to begin experiencing thoughts as discreet mental events. A thought is just a thought. As one thought floats away it is replaced by another, and another, and so on.

- Emotions: can create positive and negative internal states. They function to motivate behavior. As children, we are often socialized to control our emotions. You are encouraged to be open to each emotional experience and treat each emotion as if it is a wave. Watch it build in intensity, peak, and then descend only to be replaced with a new emotion that will itself rise up and be replaced by the next emotion.
• Associations: These are mental operations that connect something that is happening to something that has happened previously. Associations frame how we organize experiences and develop rules about how to behave. Associations are used to compare and contrast or find similarities or differences, for instance, “I feel better today than I did yesterday” or “If I don’t know something, then I must be incompetent.” Associations act as mental short-cuts and rules that can trigger an automatic response and consequently make it hard to alter our response even when the context changes.

• Memories: These mental operations allow us to bring forward elements of our past experiences and often trigger associations. Humans naturally experience memories consciously or unconsciously throughout our day; however, we have a tendency to avoid thinking about memories that are painful and avoid situations that might trigger negative ones. Memories can become more intrusive when avoided.

• Sensations: Our combined experience from each of our senses constitutes our sensations and is often the reason that we are seeing our patients. They can also be the somatic result of mental activity. Sensations occur in the present moment; however, it is language that directs our attention to what we are sensing. Provocative evaluations of those sensations can become problematic; for example, “My heart is beating fast. This isn’t right. Maybe I’m having a heart attack. My father died of a heart attack.”

When our personal experience becomes distressing or we are faced with ambiguity, our first impulse is to avoid that experience. It’s a natural response. However, our
internal personal experiences are not life threatening, they just feel that way. When we do avoid them, it takes other possible responses off the table and limits how we might address the situation. Avoidance of those experiences will reduce the flexibility of our reactions.

To promote your psychological flexibility, practice the following over the next week:

1. On a daily basis, block at least 7 minutes of your day to sit and witness your TEAMS.
   a. Choose a time with minimal distractions and turn off any electrical devices that may pose a distraction.
   b. Find a comfortable place to sit with your back straight.
   c. Take 10 slow, deep, breaths. Notice how the air enters and leaves your body.
   d. Spend the next few minutes observing and describing to yourself what you are experiencing. What TEAMS come up? What is your mind doing? Is it bouncing from the present to the future or past? If so, you are a normal human being.
   e. When your attention shifts away from what is presently happening, gently bring it back to your present moment experience.
   f. Take 10 more slow deep breaths, noticing how the air enters and leaves your body.
   g. If you closed your eyes, gently open them and resume the rest of your day.
2. On a daily basis, block at least 7 minutes of your day to work on an emotion you find distressing.

   a. Start the exercise by focusing on your breathing.

   b. Notice how you feel inside your body.

   c. Notice and describe your emotion. Note the strength and intensity.

   d. Notice if the feeling is growing or diminishing; picture it like a wave.

   e. Describe any new emotions or changes in quality.

   f. Notice the urge to block the emotion, but keep watching.

   g. Notice impulses to act on the emotion, but watch without acting.

   h. Notice judgments about yourself, others, or the emotion, and let them go.

   i. Keep watching until the emotion either changes or diminishes.

   j. Take 10 more slow deep breaths, noticing how the air enters and leaves your body.

3. On a daily basis, spend a few moments practicing any one of the following:

   a. Watch your thoughts as you focus on your breathing.

   b. Labeling thoughts. For example, “I’m having the thought that (say the thought)” or “I’m having a (type or category, i.e. worry) thought.”

   c. Let go of thoughts. Visualize the thought as a leaf on a stream or as a billboard as you drive along the highway or try physically letting go by turning your hand to “drop” the thought.
d. A combination of the above exercises.

4. Track your practice sessions. How often did you practice? How long did you practice? What barriers arose that prevented practice? How might you overcome those barriers in the future?

Module 3

Over the past two modules you have learned about the components and risks associated with burnout, explored your personal work stressors, and learned about the paradox of attempting to control your inner experience. You also learned how to watch and become more aware of your personal experiences and practiced ways to be more open to distressing personal experiences.

In this module, you are asked to reconnect with what brings meaning in your life. Relocate yourself on the bull’s eye presented in Module 1. What would need to happen in order for you to feel recharged and reconnected at work? Do you have ideas on how to change the work flow or culture, but have feared what might happen or that nothing will happen?

This last module is about taking courageous steps and adopting an attitude of willingness to take actions toward your values and what brings meaning to your life. Just like a patient who has to feel the pinch of a shot to receive a vaccine, you too must expose yourself to small doses of the very things you have been avoiding…your distressing personal experiences. These experiences may take the form of self-doubt, cynicism, shame, fear, persistent memories, physical pain, or negative associations. Use your values, your friends, partners, and colleagues as motivation to lean into those difficult experiences.
This last module is an invitation to step out of your comfort zone. Not jump out! Just step out. You have worked hard to increase awareness of yourself and your distressing experiences. This is an opportunity to take steps toward your values and ask yourself “Am I willing to experience some discomfort in order to live with vitality and meaning?”

Over the next week:

1. Commit to taking one or two actions daily from each quadrant of the bull’s eye.
2. Verbalize your intentions
3. Create a burnout prevention and recovery plan
   a. Describe specific behaviors you intend to use, when you will use them, and how often you will use them in each of the following areas:
      i. Practice of Acceptance
      ii. Practice of Mindfulness (present-moment awareness, observer of yourself)
      iii. Practice of being in Contact with Personal Values
      iv. Practice of Value-Consistent Daily Action
   b. Do this for each quadrant of the bull’s eye.
   c. Consider incorporating the following:
      i. Exercise – mediates burnout, promotes quality of life
      ii. Diet – proper nutrition improves distress tolerance
      iii. Sleep – healthy sleep hygiene improves distress tolerance
      iv. Decrease negative health habits, i.e. substance abuse (tobacco, alcohol, drugs, caffeine, etc.)
v. Ways to make constructive, positive changes to the work environment.

**Intervention Feedback**

1. What did you like most about this intervention?

2. How do you think the intervention could be improved?

3. Which module did you find most helpful? Why?

4. Which module did you find the least helpful? Why?

5. Did you feel like you learned strategies for improving your management of stress?

6. Would you recommend a web-based intervention to others? Why or why not?

7. What, if anything, would you liked to have experienced MORE of?

8. What, if anything, would you liked to have experienced LESS of?

9. How often did you rehearse the exercises?

10. How often did you experiment with skills in real experiences?
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doi:10.1002/chp.21211


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