EVIDENCE-BASED RECOMMENDATIONS TO ADDRESS NURSE BURNOUT:

A BEST PRACTICE APPROACH

By

SARAH JEAN NAVES

A Thesis Submitted to The Honors College

In Partial Fulfillment of the Bachelors Degree

With Honors in

Nursing

THE UNIVERSITY OF ARIZONA

DECEMBER 2016

Approved by:

Dr. Melissa M. Goldsmith, PhD, RNC
Clinical Associate Professor, College of Nursing
Evidence-Based Recommendations to Address Nurse Burnout:

A Best Practice Approach

Sarah J. Naves

The University of Arizona

College of Nursing
# Contents

ABSTRACT ................................................................................................................................. 5

CHAPTER 1 ................................................................................................................................. 6

BACKGROUND ............................................................................................................................ 6

NURSE BURNOUT ....................................................................................................................... 6

*Nurse burnout manifestations.* .................................................................................................. 8

*Nurse burnout prevalence.* ....................................................................................................... 9

*Outcomes of nurse burnout.* .................................................................................................... 10

  Professional outcomes. ........................................................................................................... 10

  Patient outcomes. ................................................................................................................... 12

COMPASSION FATIGUE ............................................................................................................. 12

ENGAGEMENT .......................................................................................................................... 13

CONCLUSION ............................................................................................................................. 14

CHAPTER 2 .................................................................................................................................. 15

PERSONAL BURNOUT DETERMINANTS AND INTERVENTIONS ............................................ 15

  *New graduate nurses.* ......................................................................................................... 15

  Nurse residency program. ...................................................................................................... 17

  *Personality dimensions.* .................................................................................................... 18

  Adequate sleep. ....................................................................................................................... 20

  Mindfulness. .......................................................................................................................... 21

  *Physical activity.* ................................................................................................................ 25

  Yoga. ....................................................................................................................................... 28
ORGANIZATIONAL DETERMINANTS AND INTERVENTIONS ........................................ 29

Shift length. ........................................................................................................... 29

Leadership............................................................................................................. 31

Authentic leadership. .............................................................................................. 32

Transformational leadership. .................................................................................. 33

Psychological capital and bullying. ........................................................................ 34

Hardiness education. .............................................................................................. 36

CONCLUSION ........................................................................................................ 40

CHAPTER 3 ............................................................................................................ 41

PURPOSE ................................................................................................................ 41

PERSONAL NURSE BURNOUT INTERVENTIONS ............................................... 42

New graduate nurses............................................................................................. 42

Personality dimensions. ......................................................................................... 42

Adequate sleep. ........................................................................................................ 43

Mindfulness. ........................................................................................................... 43

Physical activity. .................................................................................................... 44

Yoga.......................................................................................................................... 45

ORGANIZATIONAL NURSE BURNOUT INTERVENTIONS ............................ 45

Shift length. ............................................................................................................. 45

Leadership............................................................................................................. 46

Psychological capital and bullying. ...................................................................... 46

Hardiness education. .............................................................................................. 47

CONCLUSION ........................................................................................................ 48
Abstract

The purpose of this thesis was to develop a set of evidence-based recommendations that address and prevent burnout among registered nurses. Burnout is a psychological syndrome that results from prolonged stress at the job (Adriaenssens, De Gucht, & Maes, 2014). Registered nurses are at a particularly high risk for burnout due to the nature of their work, as nurses are intensely involved with their patients’ problems (Canadas-De la Fuente et al., 2015; Maslach, Jackson, & Leiter, 1997). High prevalence coupled with the negative outcomes of nurse burnout indicate a pressing need for an intervention. A literature review was conducted using search terms “nurse,” “burnout,” “intervention,” and “prevention” in Cochrane, PubMed, and CINAHL databases. Results suggested that several personal and organizational determinants and interventions could prevent and reduce nurse burnout. Evidence-based recommendations were derived from current nurse burnout literature. The proposed implementation method of the recommendations includes a presentation to student nurses with techniques to prevent and address burnout, as new graduate nurses are at highest risk of burnout (Rudman & Gustavsson, 2011). The students will practice an evidence-based recommendation that could reduce burnout for eight weeks. The implementation will be evaluated by a reflection journal and post-survey.
Evidence-Based Recommendations to Address Nurse Burnout: A Best Practice Approach

Chapter 1

The purpose of this thesis was to develop a set of evidence-based recommendations in order to address and prevent burnout among registered nurses. This thesis analyzed and defined nurse burnout, explored the determinants of nurse burnout, and proposed personal and administrative recommendations to lower the rates of nurse burnout. In this thesis, recommendations for best practice were derived from evidence-based research articles that address nurse burnout, including interventions and outcomes. A proposed best practice was outlined with the intent to decrease the rate of nurse burnout and therefore reduce the negative consequences of burnout. Through having an understanding of this concept, individuals and organizations can develop interventions tailored to reduce nurse burnout.

Background

Burnout is a significant problem in the work environment with substantially increased prevalence over the past decade (Canadas-De la Fuente et al., 2015). Burnout develops in response to taxing work situations (Rudman & Gustavsson, 2011). It is defined as a state of depletion of resources of an employee and is a result of negative perception of the work environment (Adriaenssens et al., 2014). Several studies show that a negative perception of the work environment and high strain are related to the state of depletion of resources in burnout (Adriaenssens et al., 2014).

Nurse Burnout

Christina Maslach is a social psychologist and psychology professor known for her research on occupational burnout (University of California Berkely Psychology [UCBP], 2016). Maslach pioneered a burnout framework that is now widely accepted and cited in several studies.
RECOMMENDATIONS TO ADDRESS NURSE BURNOUT (UCBP, 2016). Maslach also developed the Maslach Burnout Inventory, which is the most widely used research measure in the field of burnout (UCBP, 2016). Maslach’s occupational burnout framework and the Maslach Burnout Inventory are frequently cited in nurse burnout literature. Further, Maslach’s burnout definition is most accepted throughout literature (Canadas-De la Fuente et al., 2015). Thus, Maslach’s burnout definition and framework were used throughout this thesis.

According to Maslach and other collaborators, burnout occurs frequently among professionals in human services (Maslach et al., 1997). Human services professions, particularly nursing, require staff to be intensely involved with clients and their problems (Maslach et al., 1997). As a result, the relationship may be charged with feelings of despair, fear, or anger (Maslach et al., 1997). Solutions for the client’s complications are not always readily available or obvious, so the situation may become frustrating and ambiguous for the professional (Maslach et al., 1997). For the professional constantly working with clients under these circumstances, “the chronic stress can be emotionally draining and lead to burnout” (Maslach et al., 1997, p. 192). Thus, Maslach recognizes that burnout is a psychological condition that results from prolonged psychological or emotional stress at the job (Adriaenssens et al., 2014). Burnout, as described by Maslach, is as an internal reaction caused by external factors, resulting in depletion of social and/or personal resources (Adriaenssens et al., 2014).

According to Maslach, burnout as a psychological syndrome is characterized by three essential dimensions: emotional exhaustion, depersonalization, and lack of personal accomplishment (Maslach et al., 1997). The first dimension, emotional exhaustion, occurs when emotional reserves are depleted and employees feel that they are no longer able to provide work of good quality or “give themselves at a psychological level” (Adriaenssens et al., 2014; Maslach
et al., 1997, p. 192). These employees have major feelings of energy loss and a sense of being drained of physical and emotional strength (Adriaenssens et al., 2014). The second dimension, depersonalization, is described as the development of negative attitudes, including negativism and cynicism, in which clients and coworkers are approached with derogatory prejudices and treated as such (Adriaenssens et al., 2014). The depersonalized employee often view their clients as deserving of their troubles (Maslach et al., 1997). Maslach et al. believe that the development of depersonalization is related to the occurrence of emotional exhaustion (Maslach et al., 1997).

The third dimension, lack of personal accomplishment, is defined as the lack of feelings of personal and job competence and feelings of failure in achieving goals (Adriaenssens et al., 2014). This is the tendency of the employee to evaluate oneself negatively (Maslach et al., 1997).

There is general agreement that emotional exhaustion is the core dimension of burnout (Adriaenssens et al., 2014). This is also considered to be the stress component of burnout; when emotional exhaustion is sustained over time, it may lead to increased feelings of cynicism in depersonalization (Spence-Laschinger & Grau, 2012).

Although burnout is seen as an individual reaction, work factors such as high job demands are believed to drive people into a downward spiral of expending valuable personal resources, such as time, effort, and energy, which may lead to burnout (Rudman & Gustavsson, 2011). Job demands are defined as the organizational, social, and physical aspects of the job that require sustained physical and/or psychological effort of the employee (Garrosa, Moreno-Jimenez, Rodriguez-Munoz, & Rodriguez-Carvajal, 2011). High job demands have been associated with burnout (Rudman & Gustavsson, 2011).

**Nurse burnout manifestations.** Nurses suffering from burnout often manifest psychosomatic problems (insomnia and weakness), emotional problems (depression and
anxiety), attitude problems (distrust, apathy, and hostility), and behavioral problems (irritability, aggressiveness, and isolation) among other problems (Canadas-De la Fuente et al., 2015). Nurse burnout may also manifest as poor self-rated health, neck and back pain, sleep disturbance, and perceived memory impairment (Spence-Laschinger & Grau, 2012). Workers’ attitudes and behaviors become negative in response to job strain, and common feelings associated with burnout include frustration, cynicism, powerlessness, exhaustion, and inability to meet work goals (Meyer et al., 2013). In addition, workers experiencing burnout may feel less engaged in their work (Meyer et al., 2013).

**Nurse burnout prevalence.** Nurses are considered to be at risk for burnout because of the nature of their work, as nurses are intensely involved with their clients’ problems (Canadas-De la Fuente et al., 2015; Maslach et al., 1997). The prevalence of burnout in the general working population in Western countries ranges from 13% to 27% (Adriaenssens et al., 2014). Nurses are known to be at a higher risk for burnout development than other occupations, and several studies have found a significant rate of burnout in the nursing profession (Adriaenssens et al., 2014). A systematic review of 17 empirical quantitative studies revealed that 42% of the general nursing population experienced burnout (Adriaenssens et al., 2014). Though all nurses are vulnerable to burnout, some nursing specialties are more vulnerable than other specialties (Adriaenssens et al., 2014). This study revealed the following high rates of burnout: 59% in mental health nurses, 51% in primary care nurses, 40% in hospital nurses, 33% in intensive care unit nurses, 31% in chronic hemodialysis nurses, and 26% in emergency nurses (Adriaenssens et al., 2014). One study found that permanent nurses had higher rates of burnout than temporary-contract nurses (Garrosa, Moreno-Jimenez, Rodriguez-Munoz, & Rodriguez-Carvajal, 2011).
Novice nurses were found to be particularly at risk for the development of burnout (Rudman & Gustavsson, 2011). During the first three years of practice, for instance, nearly one in five nurses were at some point burned out (Rudman & Gustavsson, 2011). Research has revealed ambiguity and mixed results regarding rates of burnout in different age groups. However, those of younger age seem especially vulnerable to early-career burnout (Rudman & Gustavsson, 2011). Higher levels of stress on nursing units may result in tension between nursing staff and increase the incidence of bullying particularly toward new nurses, putting them at greater risk for burnout (Spence-Laschinger & Grau, 2012). High rates of nurse burnout suggest that interventions should be developed to address and prevent against the condition.

**Outcomes of nurse burnout.** Nurse burnout is important to address because of numerous negative outcomes. These negative effects may be divided into professional outcomes, those that negatively impact the nurse and work environment, and patient outcomes, those that negatively affect the burnt out nurses’ patients.

**Professional outcomes.** Burnout affects nurses’ workplace in numerous ways, both public and private (Canadas-De la Fuente, 2015). Various studies have associated burnout with negative emotional and physical health (Spence-Laschinger & Grau, 2012). A relationship was found between burnout and the occurrence of depression, insomnia, obesity, and musculoskeletal disorders (Adriaenssens et al., 2014). Another study mentioned that burnout might predispose nurses to hypertension, ulcers, migraines, diabetes, sleep disturbances, and anxiety (Henderson, 2015). Further, the development of dangerous habits is a consequence of nurse burnout; some nurses abuse alcohol or drugs or adopt unhealthy eating habits as a result of burnout (Henderson, 2015). The link between mental and physical health is supported by many studies that have found a relationship between physical health and depressive symptomology (Spence-Laschinger
& Grau, 2012). Burnout also has a negative impact on the quality of life of the employee, with more intra-relationship conflicts and aggression (Adriaenssens et al., 2014). For instance, burnout has been associated with marital and family problems (Maslach, 1997). Further, nurse burnout is associated with a decreased level of job satisfaction (Meyer et al., 2015). Burnout is directly related to job satisfaction and nurses’ well being (Adriaenssens et al., 2014).

Nurse burnout may lead to significant economic loss through more sick leave, increased absenteeism, higher turnover rates, and, in return, a rise in healthcare costs (Adriaenssens et al., 2014; Candadas-De la Fuente, 2015). The high rate of illness-related absenteeism among nursing professionals further complicates the issues of short staffing and the nursing workforce shortage (Spence-Laschinger & Grau, 2012). The financial consequences that healthcare organizations face as a result of nurse burnout and higher turnover rates are extreme. Each registered nurse turnover costs a healthcare facility an average of $62,100 to $67,000; therefore, every 15 positions vacant due to turnover can cost the organization up to $1 million (Henderson, 2015). This overwhelming cost could greatly damage the healthcare organization. The current nursing shortage worldwide has moved the retention of new nurses to a higher priority (Spence-Laschinger & Grau, 2012).

One source highlighted the effect of nurse burnout on “good work in nursing” (Miller, 2011, p. 146). Good work is work that is excellent (of the highest technical and scientific quality), ethical (morally and socially responsible) and engaging (work that is personally satisfying and enjoyable) (Miller, 2011). According to this article, the dimensions of nurse burnout (emotional exhaustion, depersonalization, and lack of personal accomplishment) are in opposition of the concepts of good work (Miller, 2011). Therefore, this article suggests that
nurse burnout leads to a decrease of good work in nursing that is excellent, ethical, and engaging (Miller, 2011).

**Patient outcomes.** Nurse burnout has many detrimental effects on the quality of care provided to patients. Nurse burnout leads to a diminished quality of healthcare and lower patient satisfaction (Meyer et al., 2015; Canadas-De la Fuente, 2015). A study of 161 acute care Pennsylvania hospitals examined the effect of nurse burnout on healthcare-associated infections, specifically urinary tract and surgical site infections, as these were found to be the most common hospital-acquired infections (Cimiotti, Aiken, Sloane, & Wu, 2012). Researchers determined a significant association between burnout and both urinary tract and surgical site infections among patients (Cimiotti et al., 2012). Further, hospitals in which burnout was reduced by 30% had a total of 6,239 fewer infections and an annual cost saving of up to $68 million (Cimiotti et al., 2012). Therefore, researchers believe that burnout may lead to healthcare-associated infections. Other research has revealed that nurse burnout may lead to more patient falls, as well as more medication errors (Alexander, Rollins, Walker, Wong, & Pennings, 2015).

**Compassion Fatigue**

The phenomenon of nurse burnout is often mistaken for compassion fatigue, but it is important to recognize these differences between the two experiences. According to Harris and Quinn-Griffin (2015), compassion is defined as the deep awareness of another’s suffering and the desire to alleviate it. Compassion fatigue is therefore defined as the spiritual, emotional, and physical result of prolonged self-sacrifice and exposure to difficult situations that renders a person unable to nurture or empathize with another’s suffering (Harris & Quinn-Griffin, 2015). Like nurse burnout, compassion fatigue has proposed psychological and physical components, along with a decrease in or loss of motivation (Harris & Quinn-Griffin, 2015). Nurse burnout and
Compassion fatigue are loosely related, but a significant variation between the two is the idea of compassion (Harris & Quinn-Griffin, 2015). Nurses experiencing compassion fatigue must experience compassion to feel the fatigue of it, while nurses experiencing burnout do not need the prerequisite of feeling compassion (Harris & Quinn-Griffin, 2015).

Compassion fatigue is also defined as the emotional stress that people might experience by having close contact with a trauma survivor or as the “cost to caring” (Meyer, Li, Klaristenfeld, & Gold, 2013). Meyers et al. (2013) determined that compassion fatigue predicted higher levels of burnout. This study also determined that compassion fatigue is a mediator between stress exposure and burnout, meaning that stress exposure predicted higher levels of compassion fatigue, which then predicted higher levels of nurse burnout (Meyer et al., 2013). Therefore, compassion fatigue differs from but may lead to burnout (Meyers et al., 2013).

Engagement

Researchers have started to focus attention on the conceptual opposite of burnout: engagement (Garrosa et al., 2011). Engagement is characterized by commitment, energy, and efficiency, which are all aspects directly opposite to burnout (Garrosa et al., 2011). Engagement may also be defined as a positive motivational construct characterized by vigor (high energy and mental resilience while working), dedication (being strongly involved in one’s work with a sense of meaning and pride), and absorption (being completely concentrated and happily immersed in one’s work) (Garrosa et al., 2011). Thus, researchers suggest that increasing engagement is a direct way to decrease nurse burnout (Garrosa et al., 2011).
Conclusion

Burnout is highly prevalent among nurses and has significant negative effects on nurses, their work environment, and patients’ outcomes. Burnout, as defined by Christina Maslach, is a psychological syndrome that results from chronic stress at the job (Adriaenssens et al., 2014). Burnout is characterized by three dimensions: emotional exhaustion, depersonalization, and lack of personal accomplishment (Maslach et al., 1997). Maslach’s framework of burnout is used throughout this thesis because it is the most accepted definition among burnout literature (Canadas-De la Fuente et al., 2015). Researchers believe that burnout is particularly high among nurses due to the demanding and emotionally charged nature of being involved with patient’s problems (Maslach et al., 1997). Burnout differs from compassion fatigue, and these terms are not to be used interchangeably (Harris & Quinn-Griffin, 2015). Nurse burnout is associated with detrimental consequences. Outcomes of nurse burnout include depression, drug and alcohol abuse, intra-relationship conflicts, sick leave, diminished work satisfaction, higher turnover rate, and decreased work quality, among many others (Adriaenssens et al., 2014; Henderson, 2015). Patient outcomes of nurse burnout include diminished quality of care, lower patient satisfaction, healthcare-associated infections, medication errors, and patient falls (Meyer et al., 2015; Canadas-De la Fuente, 2015; Cimiotti et al., 2012; Alexander et al., 2015). The high rate of nurse burnout and various professional and patient outcomes call for interventions set forth to decrease the prevalence of this syndrome.
Chapter 2

A review of literature was written to address determinants, effects, and interventions regarding nurse burnout. The databases, PubMed, CINAHL, and Cochrane, were used with combinations of the following search terms: nurse, burnout, intervention, and prevention. The articles between the years 2005 and 2016 were selected for use.

Results from several studies showed the role of both personal and organizational factors that influence nurses’ level of experienced burnout. A literature review including both personal and organizational factors related to burnout was developed. Though both types of determinants and interventions were included, personal determinants and interventions were emphasized. Personal factors were emphasized because each nurse may carry out these interventions without requiring significant change at the administrative level, which could be difficult and costly to implement. The Chapter Two literature review was used to propose a set of best practice recommendations in order to help prevent and address burnout among registered nurses.

Personal Burnout Determinants and Interventions

**New graduate nurses.** Newly graduated nurses are at a particularly high risk of experiencing emotional exhaustion and burnout (Rudman & Gustavsson, 2011). Younger age has been associated with higher levels of burnout in multiple studies for various reasons (Rudman & Gustavsson, 2011). For example, new graduate nurses may feel inadequately prepared, so work overload and stress put the new nurse in a vulnerable position that may lead to overwhelming feelings of frustration and failure (Rudman & Gustavsson, 2011). Despite new nurses’ vulnerability, development of post-graduation burnout has rarely been studied over a long period of time in relation to educational and demographic characteristics prior to working (Rudman & Gustavsson, 2011). A longitudinal study of 997 new graduate nurses in Sweden was therefore
carried out to identify and compare common patterns of individual development of burnout symptoms over a three-year period (Rudman & Gustavsson, 2011). The nurses were assessed four times annually (one time during education and three times post graduation for three years), which is the period that is believed to be especially vulnerable to burnout development (Rudman & Gustavsson, 2011). Changes of burnout within the new nurses were analyzed using a repeated-measures analysis of variance; cluster analytic techniques were then used to identify usual trajectories of burnout (Rudman & Gustavsson, 2011).

This study revealed the highest average level of burnout was two years post graduation, though the changes over time were small (Rudman & Gustavsson, 2011). The increased levels during this time were most likely related to influence of work environments (Rudman & Gustavsson, 2011). Researchers also discovered eight common change trajectories of burnout in new nurses; seven of these revealed significant change over time (Rudman & Gustavsson, 2011). The change trajectories were described as: (a) Unaffected individuals; (b) individuals changing from moderate to low levels of burnout; (c) Individuals developing low to moderate levels of burnout; D) Individuals with moderate and rather stable levels of burnout; E) Individuals with increasing burnout, followed by recovery; F) Individuals with moderate levels, becoming higher across time; G) Individuals with initially high values of burnout, recovering across time; and H) Individuals with high and increasing levels of burnout (Rudman & Gustavsson, 2011). Nearly one in five nurses reported extremely high levels of burnout at some point in their first three years after graduation (Rudman & Gustavsson, 2011). This study revealed, “most changes in burnout levels were accompanied by concurrent changes in depressive symptoms and intention to leave the profession” (Rudman & Gustavsson, 2011, p. 302). Researchers state that development of burnout is predicted by not feeling well prepared for a nursing job, basing self-
esteem on work performance, lacking interest in the nursing profession, and depressed mood in the last year of education (Rudman & Gustavsson, 2011). Overall, this study suggests that it is important to reinforce good professional adjustment for novice nurses (Rudman & Gustavsson, 2011). Researchers emphasize that an unsupportive work environment puts new graduate nurses at a particularly high risk for burnout (Rudman & Gustavsson, 2011). However, researchers mention that a supportive practice environment can help new graduate nurses manage their work in a way that reduces stressful impact on their health and ability to provide care (Rudman & Gustavsson, 2011).

*Nurse residency program.* There is now a large amount of research exploring the new graduate nurse’s transition while in a nurse residency program. Research suggests that new graduate nurse residency programs ease the transition into the nursing profession, particularly when the new graduate nurse is assigned a preceptor (Gardiner & Sheen, 2016). A preceptor is expected to be an experienced nurse who has additional training in assisting new staff members (Gardiner & Sheen, 2016). The use of a preceptor can help the new graduate nurse to “feel supported and become part of the nursing team by building positive relationships” (Gardiner & Sheen, 2016, p. 10). New graduate nurses reported that preceptors offer emotional and practical support to them, which was highly beneficial (Gardiner & Sheen, 2016). In a different study, social support was found to mediate the effects of stress in the nursing work environment (Henderson, 2015). Social support was also found to be protective against nurse burnout, indicating that nurses with social support have less burnout (Garrosa, Rainho, Moreno-Jimenez, & Monteiro, 2010). Thus, one can infer that the social support of a nurse residency with a preceptor may lead to a decrease in nurse burnout.
Despite the growing body of literature regarding nurse residency programs, there were no studies found that directly research the effects of nurse residencies on the prevention of burnout. This topic requires further research, as it may reveal that nurse residencies reduce the prevalence of burnout.

**Personality dimensions.** Recent research has investigated the role of personality factors in the development of nurse burnout. Several studies have found that certain personality traits could be conducive to the development of burnout or may protect against the development of the disorder (Canadas-De la Fuente et al., 2015). There is prominent research regarding The Big Five personality traits, which include “neuroticism (level of emotional instability), agreeableness (level of interpersonal tendencies to approach or reject others), conscientiousness (level of self-control and self-determination), extraversion (level of energy and sociability), and openness to experience (level of intellectual curiosity and esthetic sensibility)” (Adriaenssens et al., 2014; Canadas-De la Fuente et al., 2015, p. 242). The Big Five personality traits were found to be associated with burnout (Adriaenssens et al., 2014; Canadas-De la Fuente et al., 2015). For instance, depersonalization and emotional exhaustion, two dimensions of burnout, have a negative relationship with agreeableness, emotional stability, extraversion, and conscientiousness (Canadas-De la Fuente et al., 2015). In other words, nurses with high levels of agreeableness, emotional stability, extraversion, and conscientiousness have a reduced risk for the development of burnout (Canadas-De la Fuente et al., 2015).

Researchers found that nurses with neuroticism, the opposite of emotional stability, show negative emotions such as depression, anxiety, and frustration (Canadas-De la Fuente et al., 2015). For this reason, individuals with high levels of neuroticism often use coping skills based on distraction and avoidance (Canadas-De la Fuente et al., 2015). Researchers reported that in all
likelihood, this kind of behavior could lead to higher levels of depersonalization and emotional exhaustion with a lower sense of personal accomplishment, which begins burnout (Canadas-De la Fuente et al., 2015).

Agreeability was also discovered to play a role in the development of burnout. According to researchers, agreeability is “associated with individuals who are more cooperative, flexible, and trusting” (Canadas-De la Fuente et al., 2015, p. 242). During stressful situations, individuals with high agreeability seem to use coping strategies that focus directly on the problem (Canadas-De la Fuente et al., 2015). Further, extroverts, who by nature are more enthusiastic, self-confident, and sociable, are more likely to be optimistic and are therefore able to positively reevaluate their problems (Canadas-De la Fuente et al., 2015). This may lead to lower levels of burnout among nurses with high levels of agreeability and extraversion.

Openness to experience is typically found in independent individuals who are tolerant of ambiguity and who are able to embrace new ideas and experiences (Canadas-De la Fuente et al., 2015). Further, people with an open mind often use humor as a strategy to cope with stressful situations (Canadas-De la Fuente et al., 2015). Individuals who use the most effective coping strategies, which is characteristic of people with positive personality factors of agreeableness, emotional stability, extraversion, conscientiousness, and openness to experience, can lead to lower levels of depersonalization and emotional exhaustion, as well as a higher level of personal accomplishment (Canadas-De la Fuente et al., 2015). Thus, individuals with high levels of these character traits (agreeableness, emotional stability, extraversion, conscientiousness, and openness to experience) often use more effective coping strategies, which is in turn related to lower levels of burnout dimensions (Canadas-De la Fuente et al., 2015).
**Adequate sleep.** Researchers in Taiwan found that shorter sleep duration is dose-dependently related to nurse burnout (Chin, Guo, Hung, Yang, & Shiao, 2015). According to this article, lack of sleep is common among nurses; however, prior research of a relationship between sleep hours and job strain and burnout were lacking (Chin et al., 2015). The aim of the study was therefore to assess the prevalence of short sleep duration in female Taiwan nurses and the association between sleep duration and job strain and burnout (Chin et al., 2015). This study used a cross-sectional survey among female nurses in Taiwan health centers through a self-administered structured questionnaire (Chin et al., 2015). This questionnaire assessed burnout through three measurements: (1) personal, or general, burnout, for measuring the degree of burnout in personal life, regardless of his or her work life, (2) work-related burnout, for measuring degree of burnout caused by work, and (3) client-related burnout, for measuring degree of burnout caused by contact with clients or patients (Chin et al., 2015).

Stratified sampling was used, and 1384 nurses satisfactorily completed the questionnaire (Chin et al., 2015). The average sleep duration per working day was 6.6 hours, and 12.2% of nurses slept less than 6 hours after a working day (Chin et al., 2015). Results revealed that high personal burnout was associated with a higher percent of working night shifts and acting as the major financial earner of the family (Chin et al., 2015). High work-related burnout was associated with younger age, being unmarried, and having a less stable employment contract (Chin et al., 2015). High client-related burnout was associated with younger age, being unmarried, a higher percent of night shifts, and lower tenure in current job (Chin et al., 2015).

Longer sleep duration was strongly related to lower client-related burnout in a linear manner (Chin et al., 2015). Personal and work-related burnout were related to sleep duration with a plateau phenomena at sleep duration of shorter than 5 hours or longer than 7 hours (Chin
et al., 2015). Sleep duration on working days was therefore associated with burnout in a dose-dependent manner, with optimal sleep duration at 7 hours or longer (Chin et al., 2015). However, the interpretation of these results into a causal relationship must be cautious (Chin et al., 2015). Despite this caution, these findings are compatible with various studies cited in the article (Chin et al., 2015).

**Mindfulness.** The Cochrane Review on the prevention of occupational stress in healthcare workers revealed that mental relaxation, such as mindfulness, effectively reduces stress and burnout among healthcare workers (Ruotsalainen, Verbeek, Marine, & Serra, 2015). Mindfulness involves the ability of lowering one’s own reactivity to challenging experiences by acting with awareness and attention (Asuero, Queralto, Pujol-Ribera, Berenguera, Rodriguez-Blanco, & Epstein, 2014). It is the ability to notice, observe, and experience thoughts, feelings, and bodily sensations even when unpleasant; the main goal is to focus on the experience instead of labels and judgment (Asuero et al., 2014). Further, mindfulness is based on being fully immersed in the present, so mindful individuals have no regrets about the past or worries about the future (Lichtenberg-Heard, Hartman, & Bushardt, 2013).

Several studies have proven the efficacy of mindfulness in reducing nurse burnout. In one study, researchers found that beginning a mindfulness-based program is effective in decreasing measures of burnout among healthcare professionals (Asuero et al., 2014). In this study, researchers implemented a pragmatic randomized controlled trial in which 68 healthcare professionals (43 in the intervention and 25 in the control group) underwent an 8-week intensive mindfulness-training program (Asuero et al., 2014). 33.3% of participants were nurses (Asuero et al., 2014). The intervention was a structured course that lasted a total of 28 hours and consisted of 8 weekly sessions of 2.5 hours each and an intensive 8-hour session in which participants
followed guided mindfulness practice (Asuero et al., 2014). Pre- and post-intervention measurements were included in this study (Asuero et al., 2014).

The intervention focused on the development of mindfulness in each of its participants with attempts to decrease burnout (Asuero et al., 2014). Each weekly session included four types of activities: educational presentation, narrative and appreciative inquiry exercises, formal mindfulness meditation, and discussion (Asuero et al., 2014). Educational presentation topics included awareness of thoughts and feelings, dealing with pleasant and unpleasant events, burnout prevention, perceptual biases and filters, conflict management, self-care, and setting boundaries (Asuero et al., 2014). Narrative and appreciative inquiry exercises comprised of participants writing brief stories about their experiences in medical practice, sharing these experiences through story telling, and listening intentionally to understand the experience of the narrator while avoiding interruptions (Asuero et al., 2014). Formal mindfulness meditation encouraged participants to notice, observe, and experience thoughts, feelings, and bodily sensations; participants were encouraged to act with awareness and attention instead of being on autopilot (Asuero et al., 2014). During the discussion portion, participants shared their experiences and discussed the effects that mindfulness practice had on them (Asuero et al., 2014).

Results indicated that after participating in this mindfulness program, burnout decreased by 6.0 points, a statistically significant change (Asuero et al., 2014). The reduction was also found in the subscales, depersonalization and emotional exhaustion, and personal accomplishment was improved (Asuero et al., 2014). This mindfulness program therefore decreased burnout in its participants; this study shows that mindfulness training promotes self-
RECOMMENDATIONS TO ADDRESS NURSE BURNOUT

awareness in health professionals and is an effective strategy to prevent and decrease burnout (Asuero et al., 2014).

Another study showed the efficacy of mindfulness in reducing burnout specifically in nurses (Mackenzie, Poulin, & Seidman-Carlson, 2006). The purpose of this pilot study was to explain and evaluate the efficacy of a brief version of the traditional mindfulness-based stress reduction program for nurses and nurse aids (Mackenzie et al., 2006). In this study, nurses and nurse aids were selected from long-term and complex continuing care units in a large urban teaching hospital (Mackenzie et al., 2006). Sixteen nurses and aids were randomly assigned to complete a four-week mindfulness program and provided pre-intervention and post-intervention ratings (Mackenzie et al., 2006). Fourteen control participants from the same units completed the same ratings while on a wait-list for the program (Mackenzie et al., 2006). The intervention and control groups did not differ on any of the demographic characteristics that the researchers obtained; however, the intervention participants had a significant higher level of emotional exhaustion (Mackenzie et al., 2006).

This intervention is a shortened version of the traditional mindfulness-based stress reduction program that retains the fundamentals of the program (Mackenzie et al., 2006). The program included four 30-minute group sessions that had a didactic section and experiential exercise in each (Mackenzie et al., 2006). The participants attended one session each week and received a CD or audiocassette recording of guided mindfulness exercises that they were instructed to practice for at least 10 minutes per day, five days per week (Mackenzie et al., 2006). They also received a manual that summarized key points about the mindfulness program (Mackenzie et al., 2006). Participants completed several questionnaires immediately before and after the four-week training program (Mackenzie et al., 2006).
Post-intervention results revealed that those who participated in the program demonstrated significant reductions in exhaustion, whereas the control group’s scores slightly increased (Mackenzie et al., 2006). Intervention participants showed relative stability over time for depersonalization scores, while the control participants’ scores increased significantly; this resulted in a significant interaction (Mackenzie et al., 2006). With regards to job-related personal accomplishment, intervention participants had higher levels than control participants before and after mindfulness training (Mackenzie et al., 2006). The training had a positive influence on personal accomplishment, but the interaction only approached significance (Mackenzie et al., 2006). Participants in both the intervention and control group reported a greater sense of coherence in the post-intervention scores; the improvement was greater for intervention than for control participants, although this interaction was not significant (Mackenzie et al., 2006). In regards to general well being and life satisfaction, control participants’ scores remained stable, while intervention participants’ scores increased significantly (Mackenzie et al., 2006). Similar results appeared regarding self-reported relaxation, which revealed a significant increase in relaxation among the intervention group (Mackenzie et al., 2006).

The results of this pilot study revealed that this brief mindfulness program significantly reduced emotional exhaustion and led to increased levels of personal accomplishment that approached significance (Mackenzie et al., 2006). This program also revealed a significant difference between post-intervention scores of depersonalization (Mackenzie et al., 2006). Thus, a brief mindfulness program helped control the three dimensions of burnout, as described by Maslach. This also suggests that the program does not necessarily need to be implemented in the time-intensive format that is usually provided to individuals with high levels of job stress (Mackenzie et al., 2006).
**Physical activity.** Though the potential of physical activity to alleviate symptoms of mental disorders has been established for years, researchers only recently began researching the potential of physical activity to relieve symptoms of burnout (Lindwall, Gerber, Jonsdottir, Borjesson, & Ahlborg, 2014). Thus, higher levels of physical activity were associated with lower levels of burnout among healthcare workers (Lindwall et al., 2014). A longitudinal study was completed over six years to determine whether changes in physical activity were correlated with changes in levels of depression, anxiety, and burnout (Lindwall et al., 2014). This study included a total of 3,717 participants who worked in hospitals, primary care, dental care, and health administration; 27% of these were nurses, and 16% were nursing aids, while the rest were medical secretaries, dental nurses or hygienists, and physicians (Lindwall et al., 2014). Surveys were obtained from participants at four time points across six years (Lindwall et al., 2014). Levels of physical activity, burnout, depression, and anxiety were assessed from these surveys (Lindwall et al., 2014).

Results revealed significant correlations between the values at baseline of physical activity and depression, physical activity and anxiety, and physical activity and burnout; there were moderate negative correlations that indicate that more physical activity is associated with fewer symptoms of anxiety, depression, and burnout at a cross sectional level at baseline (Lindwall et al., 2014). Further, there were moderately strong and negative correlations of intra-individual change in physical activity and depression, anxiety, and burnout (Lindwall et al., 2014). This shows that participants who became more active compared with others across the six years showed a larger decrease in the symptoms previously described, including burnout (Lindwall et al., 2014). On the other hand, individuals who had a smaller increase in physical activity than others also displayed less decrease in these symptoms (Lindwall et al., 2014).
Further, this study showed that when “individuals were more physically active than expected at a specific occasion, they also showed less mental health symptoms than expected (Lindwall et al., 2014, p. 1313).

Overall, results reveal that an increase in physical activity is associated with positive changes in depression, anxiety, and burnout over time (Lindwall et al., 2014). This study also reveals that during occasions when individuals were more active than expected from their expected curve, they also reported fewer symptoms of burnout than expected (Lindwall et al., 2014). The findings suggest that higher levels of physical activity are related to lower symptoms of burnout, which aligns with previous studies (Lindwall et al., 2014). Similar results were found in a study that explored the levels of physical activity and symptoms of burnout among resident physicians (Olson, Odo, Duran, Pereira, & Mandel, 2014).

In another study, physical activity was found to lead to a decrease in job burnout among patients with stress-related exhaustion (Lindegard, Jonsdottir, Borjesson, Lindwall, & Gerber, 2015). Though this study focused on decreasing burnout in patients with stress-related mental disorders rather than in nurses, it did suggest that physical activity could decrease burnout symptoms. This aligns with previous research regarding physical activity and nurse burnout. Participants included 69 patients who were referred to a stress clinic due to stress-related exhaustion (Lindegard et al., 2015). These participants, who were initially physically inactive, participated in an 18-week coached exercise program during a 12-month multimodal treatment (Lindegard et al., 2015). The exercise program used the American College of Sports Medicine (ACSM) guidelines for cardiorespiratory exercise that state adults should get at least 150 minutes of moderate-intensity exercise each week (Lindegard et al., 2015). The ACSM exercise recommendations can be met through 30-60 minutes of moderate-intensity exercise five days per
week or 20-60 minutes of vigorous-intensity exercise three days per week (Lindegard et al., 2015). Participants in this study were recommended to meet the ACSM exercise guidelines (Lindegard et al., 2015). Changes in mental health symptoms and levels of burnout were obtained over an 18-month period and compared between non-compliers, mild-compliers, and strong compliers with the physical activity recommendations (Lindegard et al., 2015).

Participants’ levels of burnout, depression, and anxiety did not differ at baseline (Lindegard et al., 2015).

There were substantial improvements among all groups after the exercise program; however, mild and strong compliers reported significantly lower burnout and depression levels at an 18-month follow-up than the non-complying group (Lindegard et al., 2015). This indicates that an increased level of physical activity, rather than the multi-modal therapy as a whole, likely leads to decreased symptoms of burnout (Lindegard et al., 2015).

A quasi-experimental study was carried out to determine the effects of a physical activity program on the levels of burnout, anxiety, depression, occupational stress, and self-perception among nursing professionals (Freitas, Carneseca, Paiva, & Paiva, 2014). The physical activity program was implemented five days per week, lasting 10 minutes per session, for three consecutive months (Freitas et al., 2014). Participants in this program included 21 nursing professionals from a palliative care unit, including two nurses and 19 nursing assistants, who completed a questionnaire evaluation before and after the intervention (Freitas et al., 2014). At baseline, seven participants reported high levels of emotional exhaustion, ten had high levels of depersonalization, and three had low levels of personal accomplishment (Freitas et al., 2014).

After the intervention, four participants reported high levels of emotional exhaustion, 11 reported high levels of depersonalization, and one reported low personal accomplishment
RECOMMENDATIONS TO ADDRESS NURSE BURNOUT

(Freitas et al., 2014). According to the pre- and post-intervention scores, participants had positive changes in levels of depersonalization and personal accomplishment, though these results did not reach statistical significance (Freitas et al., 2014). It is possible that the physical activity program had some benefit for improving emotional exhaustion as well, as observed with decreased scores for anxiety and depression (Freitas et al., 2014). Researchers noted that there was a general lack of social support, especially in the second assessment, which could have negatively affected any potential benefit from physical activity (Freitas et al., 2014). Small study size and lack of randomization and control group were limitations that the researchers noted in this study (Freitas et al., 2014). Though this study did not reveal significant results, it did suggest that physical activity could effectively reduce levels of burnout; significant levels may have been reached had there been a larger experimental group, implementation of a control group, and possibly a duration longer than 10 minutes for each exercise session.

**Yoga.** One particular form of exercise that has been shown to decrease burnout is yoga. Researchers recently studied yoga and its decrease of burnout symptoms, particularly among nurses (Alexander et al., 2015). Mind-body practices, such as yoga, have been shown to effectively improve levels of nurse burnout (Alexander et al., 2015). Researchers therefore executed a pilot-level randomized controlled trial with the purpose of evaluating the efficacy of yoga to reduce burnout and to improve self-care among nurses (Alexander et al., 2015). This study included 40 participants selected from an urban teaching hospital (Alexander et al., 2015). A sample of 20 nurses in the intervention group completed 8 weeks of supervised yoga instruction, while 20 participants in the control group did not practice yoga (Alexander et al., 2015). The emphasis of the yoga program was to provide participants with self-care tools to reduce and manage stress, including self-awareness (Alexander et al., 2015). Participants were
taught how to become conscious of their breathing, postural alignment, and how to calm their body and mind through these practices (Alexander et al., 2015). Each session concluded with deep relaxation, and each participant received handouts after every session to act as a visual reminder of the exercises for beginning a home practice (Alexander et al., 2015). As the program progressed, additional exercises, breathing practices, and meditations were added (Alexander et al., 2015).

Participants completed pre- and post-intervention questionnaire assessments (Alexander et al., 2015). No significant demographic differences were found among the control and experimental groups, suggesting that the research team did not need to control for demographic characteristics (Alexander et al., 2015). Pre- and post-intervention scores revealed that after the yoga intervention, participants had a significant decrease of emotional exhaustion and depersonalization and an increase in both self-care and mindfulness (Alexander et al., 2015). However, no significant improvements were found in the control group (Alexander et al., 2015). This exploratory study provides evidence of the efficacy of yoga to reduce burnout among nurses practicing in an urban hospital (Alexander et al., 2015).

Organizational Determinants and Interventions

**Shift length.** Researchers determined that an increase in shift length is correlated with an increase in nurse burnout (Stimpfel, Sloane, & Aiken, 2012). Increasing numbers of hospital nurses have transitioned from traditional eight-hour shifts to working twelve-hour shifts, which prompted researchers to determine the relationship between hospital nurses’ shift length and three nurse outcomes: dissatisfaction, intention to leave the job, and burnout (Stimpfel et al., 2012). This study used a secondary analysis of cross-sectional data from three sources, which yielded 22,275 nurses’ responses (Stimpfel et al., 2012). The sources were three separate surveys
that assessed many aspects of the nurses’ experiences, including shift length, intention to leave profession, burnout, and patient experiences (Stimpfel et al., 2012). Nurses were from 577 hospitals in Florida, Pennsylvania, California, and New Jersey (Stimpfel et al., 2012). Shift length was grouped into four separate categories: 8-9 hours, 10-11 hours, 12-13 hours, and more than 13 hours (Stimpfel et al., 2012).

Results revealed that 65% of nurses worked shifts between 12 and 13 hours, 26% worked shifts between 8 and 9 hours, and the remaining nurses worked shifts of either 10-11 hours or more than 13 hours (Stimpfel et al., 2012). Researchers discovered that the percentages of nurses reporting intention to leave job and burnout significantly increased incrementally as shift length increased (Stimpfel et al., 2012). The odds of job dissatisfaction and burnout were up to 2.5 times higher for nurses who worked longer shifts than for nurses who worked shifts between 8 and 9 hours long (Stimpfel et al., 2012). The odds of burnout and other unfavorable outcomes were highest among nurses who worked shifts of more than 13 hours (Stimpfel et al., 2012). Though this study did not determine a causal relationship between shift length and burnout, it provides valuable insight into the relationship between the two factors. This article later cautions nurse managers to establish practices designed to limit nurses’ hours per day and week, just as limitations have been set forth for physicians (Stimpfel et al., 2012). Results suggest that working less than 9 hours per shift is associated with less negative outcomes; however, setting forth an intervention to decrease all nurse shift lengths to less than 9 hours is an unlikely feat (Stimpfel et al., 2012). Despite this difficulty, this article suggests that working less than 9 hours is beneficial for decreasing nurse burnout (Stimpfel et al., 2012).

Another study found similar results. Researchers performed a cross-sectional survey of 31,627 registered nurses in 2170 medical-surgical units at 488 hospitals in 12 European countries
(Dall’Ora, Griffiths, Ball, Simon, & Aiken, 2015). The aim of this study was to assess the association between working long shifts and burnout (Dall’Ora et al., 2015). Researchers determined that nurses working shifts over 12 hours were more likely than nurses working less than 8 hours per shift to experience burnout, in terms of emotional exhaustion, depersonalization, and personal accomplishment (Dall’Ora et al., 2015).

The cross sectional designs of the previous studies limit the ability to determine a causal relationship between nurses’ shift length and nurse outcomes (Dall’Ora et al., 2015). However, the adverse outcomes associated with long shift length suggest that nurses and managers should question the efficacy of shifts longer than 8 hours. Though longer nursing shift length may lead to burnout, further research is required.

**Leadership.** The leadership among nurses has also been implicated in the development of burnout. Leaders play an important role in the wellbeing of the nurses by shaping the environment in which they work. Though the link between leadership and staff experiences may not be entirely direct, leadership is thought to impact various characteristics of the work environment that in turn influences staff members’ burnout and engagement (Lewis & Cunningham, 2016). Researchers have determined several burnout-preventative leadership factors.

Emotional exhaustion, the core component of nurse burnout, has been shown to decrease when work environment conditions such as administrative support, staffing adequacy, and relations between physicians and nurses are improved (Spence-Laschinger & Grau, 2012). Further, demanding work conditions such as lack of control, overload, insufficient reward, absence of fairness, breakdown of community, bad administrative support, and conflicting values have been linked to burnout (Rudman & Gustavsson, 2011). However, empowering work
RECOMMENDATIONS TO ADDRESS NURSE BURNOUT

conditions, including access to opportunity for development, support, information, resources necessary to accomplish work and formal and informal power, were shown to positively affect various areas of working life (Rudman & Gustavsson, 2011). However, when work conditions do not allow for employees to have access to these empowering conditions, this may result in a sense that the job is meaningless, which may lead to burnout.

There is a moderate amount of research regarding leadership techniques that may decrease nurse burnout. However, this research lacks consistency. Therefore, this section describes two different leadership techniques that have been proven effective in decreasing burnout.

**Authentic leadership.** There are few guidelines for a healthy nursing work environment, however, in 2005, the American Association of Critical Care Nurses released a publication that described six standards; authentic leadership was one of them (Shirey, 2006). The implementation of authentic leadership may reduce the development of burnout. Authentic leadership has been described as the glue that “holds together a healthy work environment” (Shirey, 2006, p. 257).

An authentic leader is one who is in a position of responsibility who is reliable, trustworthy, believable, and genuine (Shirey, 2006). Authentic leaders are aware of how they behave and are perceived by others as being aware of their own and others’ moral perspective, strengths, and knowledge (Shirey, 2006). Authentic leaders were found to have “five key characteristics: the abilities to understand their own purpose, practice solid values, lead with heart, establish enduring relationships, and practice self-discipline” (Shirey, 2006, p. 260). These leaders are positive and bring about change; they aim to bring out the best in themselves and others (Laschinger, Borgogni, Consiglio, & Read, 2015). Further, authentic leaders help develop
their followers’ sense of self-efficacy, resiliency, hope, and optimism, which fosters the development of their self-awareness and confidence (Laschinger et al., 2015).

Researchers found that authentic leadership in the nursing workplace leads to decreased burnout among nurses (Laschinger et al., 2015). In this study, cross-sectional data was obtained via a mail survey of 1009 Canadian new graduate nurses with less than 3 years experience (Lashinger et al., 2015). This questionnaire inquired about authentic leadership, areas of work life, occupational coping self-efficacy, burnout, and mental health (Laschinger et al., 2015). Authentic leadership was found to indirectly decrease the levels of burnout among nurses by a significant amount (Laschinger et al., 2015). However, due to the cross-sectional nature of the study, causality was not determined (Laschinger et al., 2015). Researchers suggest that authentic leadership encourages a positive and supportive work environment by helping to strengthen nurses’ confidence in their nursing abilities, which protects them from burnout development and poor mental health (Laschinger et al., 2015). Results suggest that leadership training to develop authentic leadership skills may be helpful in cultivating healthy work environments that decrease the prevalence of burnout (Laschinger et al., 2015).

*Transformational leadership.* Another leadership perspective that has proven to be helpful in reducing nurse burnout is transformational leadership (Lewis & Cunningham, 2016). Transformational leadership is shown by leaders who inspire others and work toward achieving by modifying or building on their assistants’ attitudes, beliefs, values, and motivation (Lewis & Cunningham, 2016). Transformational leaders are those who: motivate followers by expressing a vision, use inspirational communication, foster intellectual stimulation by promoting awareness of problems and how to think of them, and provide personal recognition through rewards such as praise (Lewis & Cunningham, 2016).
Researchers hypothesized that transformational leadership may impact employee burnout by increasing nurses’ self-esteem (Lewis & Cunningham, 2016). Transformational leadership is associated with low levels of subordinate stress and high subordinate well being in several work settings (Lewis & Cunningham, 2016). To determine the efficacy of transformational leadership decreasing nurse burnout, Lewis and Cunningham (2016) tested the relationships between transformational leadership and nurse burnout and engagement.

One hundred twenty full-time nurses completed surveys online or in a paper-based form (Lewis & Cunningham, 2016). Results revealed that transformational leadership was significantly and negatively related to burnout (Lewis & Cunningham, 2016). Transformational leadership was significantly positively related to engagement (Lewis & Cunningham, 2016). Though correlation does not mean causation, these results suggest that transformational leadership may lead to a decreased prevalence of nurse burnout.

**Psychological capital and bullying.** Another study was carried out to test a previously created model derived from Leiter and Maslach’s Six Areas of Worklife Model linking workplace factors (bullying, burnout, and six areas of work life) and a personal dispositional factor (psychological capital) to new graduates’ physical and mental health (Spence-Laschinger & Grau, 2012). Bullying, intentionally targeting of an employee or colleague through creating a negative work environment for them through social exclusion, degradation, and other negative acts, is a form of work place harassment that is common among nurses (Spence-Laschinger & Grau, 2012). The six areas of work life were found to be significantly related to three components of burnout, most strongly related to emotional exhaustion (Spence-Laschinger & Grau, 2012). Psychological capital, a personal resource comprised of optimism, hope, self-
efficacy, and resilience, has been shown to influence employees’ responses to work (Spence-Laschinger & Grau, 2012).

Researchers carried out a cross-sectional survey among 165 Ontario, Canada, nurses with one year or less experience as a nurse (Spence-Laschinger & Grau, 2012). Nursing participants completed measures of psychological capital, work environment quality, burnout, bullying exposure, and mental and physical health (Spence-Laschinger & Grau, 2012). Researchers hypothesized that psychological capital influences the nurse’s perception of the work environment, which then influences burnout and ultimately physical and mental health (Spence-Laschinger & Grau, 2012). Structural equation modeling was used to examine the hypothesized model (Spence-Laschinger & Grau, 2012). Results revealed that the hypothesized model had a reasonably adequate fit to the data (Spence-Laschinger & Grau, 2012).

Results revealed a positive correlation between bullying experiences and emotional exhaustion, as well as bullying experience with cynicism (Spence-Laschinger & Grau, 2012). Further, emotional exhaustion and cynicism have positive correlations with poor physical health and poor mental health, respectively (Spence-Laschinger & Grau, 2012). Researchers added a direct path from psychological capital to emotional exhaustion, showing a negative correlation between positive psychological capital and emotional exhaustion (Spence-Laschinger & Grau, 2012). This model highlights the role of both organizational and personal factors, including psychological capital and bullying experiences, that influence newly graduated nurses’ physical and mental health during their first year as nurses (Spence-Laschinger & Grau, 2012). The study suggests that personal resources are an important influence in employees’ fit with their work, as well as the role played by workplace bullying on developing burnout (Spence-Laschinger & Grau, 2012). This study is also consistent with previous research that states psychological capital
may be a protective factor in employees’ work experiences and that the link between emotional exhaustion and poor physical health is present (Spence-Laschinger & Grau, 2012).

Supportive supervisor and co-worker relationships have been determined to be particularly important to new nurses’ work stress, job satisfaction, turnover intentions, and burnout (Spence-Laschinger & Grau, 2012). Thus, hospitals are expected to implement supportive work environments to help compensate for new graduates’ hard transition into the workforce (Spence-Laschinger & Grau, 2012). However, according to this article, 33% of new nurses report exposure to bullying behaviors daily or weekly (Spence-Laschinger & Grau, 2012).

The study mentions that the new graduate nurses reported the worst fit between their expectations and their actual experience of manageable workload and fairness (Spence-Laschinger & Grau, 2012). Nurse managers have the ability to bring together new nurses and discuss what specific components of their workload they are finding unmanageable and specific practices they perceive as being unfair (Spence-Laschinger & Grau, 2012). For example, they can develop strategies to address issues such as addressing workload challenges and arranging schedules that do not give shifts based on seniority, which will increase new nurses’ perception of community and sensing a fair workplace (Spence-Laschinger & Grau, 2012). This study also recognizes the importance of a zero-tolerance policy for workplace violence and bullying, as bullying is a significant indicator for emotional exhaustion and cynicism, two components of nurse burnout (Spence-Laschinger & Grau, 2012).

**Hardiness education.** Several interventions for nurse burnout include strategies to reduce stressors in the nurse’s workplace. However, researchers suggest that interventions aimed at reducing risk for nurse burnout and improving nursing engagement may be more effective if they include enhancing nurses’ personalities rather than just decreasing environmental stressors.
One promising intervention for nurse burnout is hardiness training. Hardy personality is described as an active way of understanding a person’s relation with others, goals, and problems (Garrosa et al., 2011). Low levels of hardiness are related to higher levels of emotional exhaustion (Adriaenssens et al., 2014). Further, hardiness has an overall negative relationship with burnout, and it was found to be significant in all analyses of burnout and engagement in one study (Garrosa et al., 2011). Researchers have proposed two mechanisms that may explain the effect of hardiness on burnout: a more optimistic perception of events and the use of positive coping strategies (Garrosa et al., 2011).

Researchers completed a cross-sectional study on 508 nurses from hospitals in Madrid, Spain (Garrosa et al., 2011). This study revealed that hardy personality was significant in all dimensions of burnout; a hardy personality was negatively related to emotional exhaustion, depersonalization, and lack of personal accomplishment (Garrosa et al., 2011). Thus, nurse participants with hardy personalities experienced less burnout than individuals without hardy personalities (Garrosa et al., 2011).

A separate study on hardy personality and burnout revealed similar results. Researchers completed a temporal and cross-sectional study of 98 nurses from Portugal who completed a self-report nursing burnout scale at two points in time, four weeks apart (Garrosa, Rainho, Moreno-Jimenez, & Monteiro, 2010). Hardy personality was described by using three dimensions: commitment (belief in the value of oneself and one’s work); challenge (belief that change is a normal characteristic of life); and control (the trend to act as if one could influence
the course of events) (Garrosa et al., 2010). At the correlational level, researchers found a significant relationship between hardy personality and burnout dimensions (Garrosa et al., 2010). For instance, the hardy personality dimension, control, was negatively related to emotional exhaustion, a burnout dimension (Garrosa et al., 2010). Further, hardy personality dimensions were negatively and strongly related to lack of personal accomplishment (Garrosa et al., 2010).

Previous studies indicate that hardy personality is related to the inclination to view potentially stressful events as less threatening and instead as a challenge to learn to deal with the problematic situations, which could be preventative of burnout (Garrosa et al., 2010).

Another study determined the effects of hardiness training on registered nurses’ levels of burnout and stress (Henderson, 2015). This study mentioned that the thoughts and actions of individuals during stressful situations depend on the appraisal of the situation, in which people may categorize their experiences as harmful, threatening, or challenging (Henderson, 2015). While stressors viewed as threatening or harmful may negatively impact the individual, stressors viewed as challenging lead to the individual focusing on potential for growth and gain (Henderson, 2015). According to this study, challenged people are more likely to feel positive about their workplace stressors, so their risk for burnout is lower (Henderson, 2015).

In this quasi-experimental study, a researcher used a pre- and post-test design to determine the efficacy of a hardiness education program (Henderson, 2015). The study used a convenience sample of 50 registered nurses at an inpatient medical-surgical unit at a children’s teaching hospital in a large city (Henderson, 2015). Participants completed three surveys: a demographic data form, the Maslach burnout inventory, and a personal views survey (Henderson, 2015). Each participant then received a one-hour hardiness education session provided by the researcher on effective coping strategies and stress management (Henderson,
Participants were taught active involvement in stressful situations instead of passive retreatment and viewing challenging situations as opportunities for growth (Henderson, 2015). Participants were also taught assertiveness, critical thinking, and time management skills, as well as the importance of using interpersonal skills and social support in mediating the effects of stress in the work environment (Henderson, 2015). After the intervention, participants completed another Maslach burnout inventory survey and a personal views survey (Henderson, 2015).

This study’s findings were similar to previous studies. There was a statistically significant difference in burnout between pre- and post-intervention scores in all three subscales of burnout: emotional exhaustion, depersonalization, and lack of personal accomplishment (Henderson, 2015). Hardiness was also measured and significantly increased in all three categories, commitment, control, and challenge, as well as total hardiness (Henderson, 2015). Additionally, the researcher found that emotional exhaustion was significantly correlated with depersonalization and negatively correlated with personal accomplishment (Henderson, 2015). Further, emotional exhaustion had a significant negative relationship to total hardiness and the hardiness components (Henderson, 2015). However, hardiness had a positive relationship with total hardiness and the hardiness components (Henderson, 2015). In this study, hardiness training increased the levels of hardiness in nurses and significantly reduced burnout scores in all three categories (Henderson, 2015).

High rates of hardiness in the workplace result in workplace involvement and better relationships between staff (Henderson, 2015). Hardiness transmitted to all staff could yield a healthier workforce with less burnout (Henderson, 2015). Hardy nurses are more likely to exhibit commitment to their organization and are less likely to resign from them (Henderson, 2015).
Conclusion

Chapter Two contained a literature review of nurse burnout determinants, effects, and recommended interventions. Research on nurse burnout is plentiful, and the number of determinants and possible interventions is vast. Because of the large research base, there are several hypothesized determinants and recommended interventions that may decrease nurse burnout. However, the research behind each intervention specific to nurse burnout is relatively limited. Despite the relatively small amount of research regarding each of these, Chapter 2 summarized several of the most prominent and promising determinants and interventions that affect the development of nurse burnout. The research covered several factors of nurse burnout that can be broken down in personal burnout determinants and organizational determinants. Personal burnout dimensions were emphasized throughout this thesis because nurses may implement these without extensive administrative change that is required of organizational burnout factors. The limited research regarding each nurse burnout intervention brings difficulty to determine a set of best practice recommendations. Despite this difficulty nurse burnout research has yielded some promising interventions. The previous literature review was used in Chapter Three to create a set of evidence-based recommendations in order to reduce the prevalence of nurse burnout.
In Chapter Three, evidence-based recommendations to prevent burnout in nursing practice were discussed. Personal, as well as organizational interventions to prevent burnout were described.

**Purpose**

Nurses are known to be at a higher risk for burnout than other occupations (Adriaenssens et al., 2014). Several studies have found a significant rate of burnout in the nursing profession (Adriaenssens et al., 2014). Burnout is prevalent among nurses, and it is associated with negative professional and patient outcomes. Professional outcomes of nurse burnout include declines in both physical and mental health, including increased rates of depression, insomnia, obesity, musculoskeletal problems, intra-relationship conflict, and marital and family problems (Adriaenssens et al., 2014; Maslach, 1997). Further, some nurses experiencing burnout develop detrimental habits, such as alcohol or drug abuse and unhealthy eating patterns (Henderson, 2015). Patient outcomes of nurse burnout include a reported diminished quality of healthcare and lower patient satisfaction (Meyer et al., 2015; Canadas-De la Fuente, 2015). Burnout is associated with higher levels of healthcare associated infections, and it has been implicated in increased patient falls and medication errors (Alexander et al., 2015). Nurse burnout also leads to unexpected healthcare costs through increased sick leave, more frequent absenteeism, and higher turnover rates (Henderson, 2015; Adriaenssens et al., 2014; Candadas-De la Fuente, 2015).

The consequences of nurse burnout are significant, and the development of this problem is widespread. The implementation of personal and organizational interventions is important in order to reduce the risk of nurse burnout and its consequences.
Personal Nurse Burnout Interventions

Personal burnout interventions were emphasized because they can be implemented without change at the organizational level of the nursing environment, which could be difficult. Self-care was consistently highlighted in burnout prevention literature, and several conceptual models emphasized self-care and health promotion to decrease burnout (Alexander et al., 2015).

New graduate nurses. New graduate nurses are at a particularly high risk of burnout for various reasons (Rudman & Gustavsson, 2011). New nurses often feel inadequately prepared, vulnerable, and frustrated, which may lead to feelings of failure (Rudman & Gustavsson, 2011). Researchers believe that nurses have the highest risk for the development of burnout during the first three years of working (Rudman & Gustavsson, 2011). A study revealed a small but significant peak of burnout three years post graduation (Rudman & Gustavsson, 2011). Research reveals that nurse residency programs, particularly programs with preceptors, offer new graduate nurses emotional and practical support, which could mediate the effects of stress in the work environment (Gardiner & Sheen, 2016). Further, social support was found to be a negative predictor of nurse burnout (Garrosa et al., 2010). It is likely that nurse residency programs with preceptors may reduce the new graduate’s risk for burnout, though this topic requires more research. Thus, new graduate nurses should understand their high risk for burnout during their first three years of working (Rudman & Gustavsson, 2011). In order to reduce their risk for burnout, newly graduated nurses should opt for employment that offers nurse residency or new graduate programs with preceptors.

Personality dimensions. The Big Five personality traits, which include neuroticism, agreeableness, conscientiousness, extraversion, and openness to experience, are associated with burnout (Canadas-De la Fuente et al., 2015). For instance, nurses with high levels of
agreeableness, conscientiousness, extraversion, and openness to experience, and low levels of neuroticism, have lower levels of burnout (Canadas-De la Fuente et al., 2015). Therefore, nurses should explore their personalities using The Big Five personality traits to help determine their risk for nurse burnout (Canadas-De la Fuente et al., 2015). Nurses could use an online version of the Big Five Personality Test to determine their levels of the personality traits.

**Adequate sleep.** According to Chin et al. (2015), researchers found that shorter sleep duration is dose-dependently related to nurse burnout. Further, lack of sleep was found to be prevalent among registered nurses (Chin et al., 2015). Longer sleep duration was associated with less work-related nurse burnout in a linear manner (Chin et al., 2015). The optimal sleep duration was found to be longer than 7 hours (Chin et al., 2015). Although one must be cautious to interpret these results as a causal relationship, these findings align with various other studies (Chin et al., 2015). This study recommends that nurses should sleep at least 7 hours per night before and after a working day to limit the risk of nurse burnout.

**Mindfulness.** Mindfulness has been proven to reduce burnout (Asuero et al., 2014; Mackenzie et al., 2006; Ruotsalainen et al., 2015). One particular study determined that mindfulness was effective in reducing burnout among nurses (Asuero et al., 2014). In this intervention, participants underwent a program focused on the development of mindfulness in its participants (Asuero et al., 2014). This 8-week intensive mindfulness program consisted of one 8-hour session and weekly 2.5-hour sessions focused on the development of mindfulness (Asuero et al., 2014). A brief version of the mindfulness program also proved to be effective in reducing nurse burnout (Mackenzie et al., 2006). This program included weekly 30-minute group sessions plus 10 minutes of mindfulness practice each day (Mackenzie et al., 2006). This intervention significantly decreased depersonalization and exhaustion and increased personal
accomplishment among nurses and nurse aides, though this result only approached significance (Mackenzie et al., 2006). Thus, the practice of mindfulness reduces burnout among nurses. In order to reduce the risk for burnout development, nurses should undergo an 8-week mindfulness program with one 8-hour session and weekly 2.5-hour sessions, similar to the program described in Asuero’s study (2014). The program should consist of presentations of relevant topics, mindfulness-based coping strategies, mindfulness practice, and group discussions (Asuero et al., 2014). After receiving the formal mindfulness training, nurses should consistently practice mindfulness, particularly while they are at the workplace.

**Physical activity.** Physical activity has been implicated in the reduction of several adverse psychological symptoms (Lindwall et al., 2016). A negative correlation was found between physical activity and burnout among healthcare workers; higher levels of physical activity among healthcare workers are now associated with lower levels of nurse burnout (Lindwall et al., 2016). Further, an increase in physical activity is associated with positive changes in burnout over time (Lindwall et al., 2016). Burnout was also reduced in patients with stress-related exhaustion after participating in an 18-week exercise program (Lindegard et al., 2015). A quasi-experimental study about a physical activity program revealed similar results among nurses, though these results only approached statistical significance (Freitas et al., 2014). This program consisted of 10 minutes per day for five days per week over three months of physical exercise (Freitas et al., 2014). Though the results did not reach statistical significance, researchers suggest that exercise may be effective in reducing nurse burnout, even in small increments (Freitas et al., 2014). Thus, nurses should maintain physical fitness and partake in a regular exercise routine in order to reduce their risk for burnout. Nurses should follow the ACSM guidelines for cardiorespiratory exercise, which recommend that adults get at least 150 minutes
of moderate-intensity exercise per week (Lindegard et al., 2015). Nurses may also reach this exercise guideline by completing 30-60 minutes of moderate-intensity five days per week, or 20-60 minutes of vigorous-intensity exercise three days per week.

**Yoga.** One form of exercise in particular that was found to reduce nurse burnout is yoga (Alexander et al., 2015). Yoga increases participants’ physical fitness, self-care, and mindfulness, which may be reasons that it helps reduce nurse burnout (Alexander et al., 2015). Because of its efficacy in reducing nurse burnout, research suggests that nurses should participate regularly in yoga (Alexander et al., 2015). Nurses should attend at least one professionally led yoga session for an hour or longer per week. Nurses should attend yoga sessions that teach how to become aware of breathing, postural alignment, deep breathing, and monitoring the mind with simple meditations; each session should conclude with deep relaxation (Alexander et al., 2015).

**Organizational Nurse Burnout Interventions**

**Shift length.** Research shows that an increase in shift length is correlated with an increase in nurse burnout (Stimpfel et al., 2012; Dall’Ora et al., 2015). Many hospitals are transitioning from eight-hour shifts to twelve-hour shifts, which has accompanied an increase in burnout (Stimpfel et al., 2012). Stimpfel et al. (2012) determined that shifts 9 hours or less are associated with much less negative outcomes than longer shifts and would likely be beneficial for decreasing nurse burnout (Stimpfel et al., 2012). Another study cautioned that nurses who worked over 12 hours were more likely than nurses working less than 8 hours to experience burnout (Dall’Ora et al., 2015). Though a causal relationship between longer shift length and burnout were not determined, these studies suggest that longer shifts lengths may lead to nurse
burnout. Research therefore advises that nurses and nurse managers should transition from longer shifts to those less than 9 hours long (Dall’Ora et al, 2015).

**Leadership.** The use of authentic leadership behaviors by nurse leaders was found to indirectly decrease burnout (Laschinger et al., 2015). Authentic leaders, those who develop their followers’ sense of self-efficacy, resiliency, hope, and optimist through reliable and genuine leadership, aim to bring out the best in themselves and others (Shirey, 2006; Laschinger et al., 2015). Authentic leaders may increase their followers’ feelings of support, which helps build up confidence in nursing abilities and decreases feelings of burnout (Laschinger et al., 2015). Therefore, researchers suggest that nursing supervisors should implement authentic leadership among the workplace to decrease nurse burnout (Laschinger et al., 2015). Further, leadership training to develop supervisors’ authentic leadership skills may be useful in creating healthy workplace environments that decrease the prevalence of nurse burnout (Laschinger et al., 2015).

The use of transformational leadership was also found to help reduce nurse burnout (Lewis & Cunningham, 2016). Transformational leaders motivate followers by focusing on a vision, use inspirational communication, foster intellectual stimulation through awareness of problems, and provide personal recognition (Lewis & Cunningham, 2016). Transformational leaders are believed to decrease followers’ feelings of burnout by increasing nurses’ self-esteem (Lewis & Cunningham, 2016). Thus, researchers suggest that leaders among the nursing workplace should use transformational leadership to help reduce nurse burnout (Lewis & Cunningham, 2016). Training to increase supervisors’ transformational leadership skills could help reduce nurse burnout.

**Psychological capital and bullying.** Researchers determined a positive correlation between nurses’ bullying experiences and both emotional exhaustion and cynicism, which are
two of three components of burnout (Spence-Laschinger & Grau, 2012). Findings therefore suggest that workplace bullying, particularly in new graduate nurses, aids in the development of burnout (Spence-Laschinger & Grau, 2012). This study emphasizes the importance of implementing supportive work environments by bringing new and experienced nurses together to discuss any areas of concern, which may help foster positive relationships (Spence-Laschinger & Grau, 2012). This study also recommends health organizations develop a zero-tolerance bullying policy for work the environment to help reduce nurse burnout (Spence-Laschinger & Grau, 2012).

**Hardiness education.** Research has shown that a hardy personality can prevent nurse burnout (Garrosa et al., 2011; Garrosa et al., 2010). Researchers believe that hardiness may create a more optimistic perception and help encourage the use of positive coping strategies, leading to a decrease in burnout (Garrosa et al., 2011). Because of this, researchers recommend that healthcare organizations should increase their nurses’ levels of hardiness through hardiness training, which is expected to significantly decrease nurse burnout (Garrosa et al., 2010; Garrosa et al., 2011; Henderson, 2015). Healthcare organizations should also implement a one-hour hardiness education session required for all nurses similar to the program described by Henderson (2015). The education session should teach nurses effective coping strategies and stress management (Henderson, 2015). The session should highlight active involvement in stressful situations, rather than passive retreatment and viewing challenging situations as opportunities for growth (Henderson, 2015). The one-hour education training should also teach assertiveness, critical thinking, time management skills, and the importance of using interpersonal skills and social support in mediating effects of stress in the work environment (Henderson, 2015).
Conclusion

Chapter Three proposed evidence-based best practice recommendations that are expected to decrease burnout symptoms. These recommendations were divided into two categories: those that may be personally implemented by the nurse, and those that are implemented by the health organization at the administrative level. Personal evidence-based recommendations included new graduate nurse residency programs with preceptors, exploration of the nurse’s Big Five personality traits, sleep duration of longer than 7 hours per night before and after a work shift, consistent practice of mindfulness, maintenance of physical fitness through regular exercise, and the practice of yoga.

Organizational evidence-based recommendations included shifts less than 9 hours long, positive leadership styles such as authentic or transformational leadership, a zero-tolerance bullying policy while bringing new and experienced nurses together, and hardiness education. Research suggested that the implementation of these recommendations could help decrease the symptoms and prevalence of nurse burnout.
Chapter 4

In Chapter Four, a method of implementation and evaluation of the nurse burnout evidence-based recommendations was outlined. The first portion of this chapter focuses on the implementation of the evidence-based recommendations that were designed to reduce nurse burnout. The implementation will be an educational presentation that targets fourth semester student nurses in The University of Arizona Bachelor of Science in Nursing program. Student nurses were selected as the target audience for several reasons. Nurse burnout education provided to student nurses prior to their entry into the nursing profession will arm them with the necessary perspective and tools to prevent and reduce burnout. Because new graduate nurses are at a particularly high risk of burnout, it is essential that students receive education on this topic prior to the start of that delicate time in their careers. This presentation will equip students with knowledge of nurse burnout, including the prevalence and negative outcomes associated with the condition. The presentation will also teach the students techniques to minimize the development of burnout before they are at risk. Students will then complete one of four personal recommendations that help reduce nurse burnout for eight weeks. Students will be expected to keep a journal that documents their experience.

The overarching goal of the implementation is as follows: Equip student nurses with the proper knowledge and skills to prevent and reduce symptoms of nurse burnout. According to Brown (2014), the implementation of evidence-based interventions such as this one may be difficult to incorporate, even when clinicians value research evidence and strive to practice in evidence-based ways. For this reason, Brown’s (2014) strategies for the execution of evidence-based innovations were used to develop the implementation of this presentation.
The latter portion of this chapter discusses the evaluation of implementing the evidence-based recommendations for reducing nurse burnout. The students will be required to complete a weekly journal that explores their experiences with completing the evidence-based recommendation. Students will reflect on what they learned and if they think the implementation is meaningful or beneficial.

**Implementation**

Brown (2014) mentions that new evidence-based recommendations should respond to an identified need. The high prevalence and significant adverse outcomes of nurse burnout indicate a pressing need for effective interventions to address this condition (Canadas-De la Fuente et al., 2015). Brown (2014) also states that prior to the implementation of new evidence-based recommendations, quality data should reveal that some aspect of healthcare is less effective than it could be. There is extensive evidence of the detrimental effects of nurse burnout, but there is minimal evidence of protocols in place to reduce or prevent this burnout among nurses. Based on this principle, the reduction of nurse burnout is an aspect of care that requires intervention.

Chapter Three’s evidence-based recommendations will be implemented through a Panopto video recording that student nurses will be required to watch. The Panopto recording will be incorporated into the curriculum of NURS 478, a class titled “Nursing Leadership and Management in Health Systems.” The class focuses on professional development. All student nurses in The University of Arizona Bachelor of Science in Nursing program must take this class during their last semester of nursing school. This content will be introduced in the sixth week of the semester during a lecture titled “Burnout/Self-Care.”

The Panopto video will contain a PowerPoint presentation with the author’s voice-over narration (See Appendix A for PowerPoint presentation). Topics of the Panopto presentation will
include the following: relevant definitions, manifestations, prevalence, outcomes, and recommendations to prevent and address nurse burnout. The presentation will highlight the increased risk for burnout among new graduate nurses, particularly during the second year of practice (Rudman & Gustavsson, 2011).

Organizational recommendations to address nurse burnout will be mentioned so students are aware of workplace factors that could influence their development of burnout. Students will be encouraged to consider these factors while applying to nursing jobs. The Panopto will emphasize personal recommendations for nurse burnout because students have the ability to implement the recommendations in their careers as nurses. Throughout the presentation, self-care will be strongly encouraged, as many forms of self-care are preventative of burnout.

The Panopto presentation will explain the Big Five Personality Test and how the test could indicate a risk for the development of burnout. The student nurses will be required to take a Big Five Personality Test after watching the Panopto video. The students will be provided an online link to a Big Five Personality Test that they must complete. The self-test has 50 questions and should take students around 15 minutes to complete. Questions on the self-test will explore the student nurses’ values and beliefs. The students will be instructed to take the self-test according to how it describes them and not on how they would like to be. The students will rate how well each statement on the self-test describes them on a scale that ranges from “inaccurate” to “accurate.” Upon completion of the test, the students’ levels of the Big Five personality traits will be revealed. The student nurses must read through the test results to determine their levels of the Big Five personality traits. The students will be expected to compare their levels with the levels of the traits described in the Panopto presentation that are associated with lower levels of burnout.
After watching the Panopto presentation, students will also be required to implement one personal evidence-based recommendation that reduces nurse burnout for eight weeks. The students will be able to choose their evidence-based recommendation to implement from the following list:

- Sleep at least 7 hours per night before and after a work or school day;
- Practice mindfulness for at least 10 minutes everyday;
- Complete at least 150 minutes of moderate-intensity aerobic exercise per week, such as biking under 9 mph, dancing, jogging, or playing tennis; or complete 60 minutes of vigorous-intensity aerobic exercise per week, such as running, kickboxing, or jumping rope;
- Attend one professionally led yoga class for one hour or longer per week.

The student nurses will be assigned a reflection journal assignment that accompanies the 8-week intervention (See Appendix B for journal assignment). Students will be supplied a print copy of this journal assignment in class. An electronic version of the reflection journal will also be available on the NURS 478 D2L webpage. The students will select the evidence-based recommendation on the reflection journal that they will follow for eight weeks. Each week, students will be expected to describe the intervention that they completed, as well as any comments pertaining to their activity. For the Week 8 reflection journal, students will reflect on their eight-week experience. They will also respond to reflection journal questions that evaluate the efficacy of the eight-week intervention.

The implementation of new evidence-based recommendations, such as Chapter Three’s recommendations for reducing nurse burnout, is often difficult to execute (Brown, 2014). For this reason, Brown (2014) recommends that, prior to implementation, change leaders should
understand that the adoption of evidence-based recommendations depends on many factors. Discussion of these factors follows.

**Characteristics of the evidence-based innovation.** According to Brown (2014), evidence-based innovations that ask a great deal from busy stakeholders may be difficult to implement. However, stakeholders will be more receptive to innovations that ask little of them (Brown, 2014). For the implementation of the Panopto recording, stakeholders include the NURS 478 course instructors and students. The innovation asks relatively little of the NURS 478 instructors, as the implementation relates to content already in the curriculum for that week, and it does not require valuable class time. The implementation of the evidence-based recommendations asks more of students: viewing the Panopto presentation, completing the Big Five Personality Test, following an evidence-based recommendation for eight weeks, and completing a reflection journal. However, these activities will be required of students, and the will be graded on their performance. This will serve as motivation for students to complete the assigned activities.

Brown (2014) also mentions that stakeholders are more receptive of innovations that they see as important to the well being of participants. The NURS 478 instructors will view this implementation as important for the well being of their students, as nurse burnout is a topic that they currently teach. Student nurses should also view the evidence-based recommendations as important to their own well being, after they learn about current nurse burnout research.

**Facilitation strategies.** Brown (2014) states that facilitation of an innovation involves making it as easy as possible for stakeholders to make the change. The implementation of nurse burnout recommendations through a Panopto recording is relatively easy for NURS 478 course instructors and students. Instructors must simply add the Panopto recording to their online D2L
website. The instructors will also review the students’ reflection journals at their end-of-semester student evaluations. Students will only have to view a 30-minute Panopto recording, take a Big Five Personality Test that takes about 15 minutes, follow one evidence-based recommendation for eight weeks, and complete a short weekly reflection. The implementation does not take a considerable amount of time out of students’ schedules. Some of the evidence-based recommendations can be completed through opportunities offered on The University of Arizona campus. Students will be encouraged to seek campus opportunities, as this could improve the ease of adopting the recommendations. In this way, the implementation of the evidence-based recommendations is made as easy as possible for the students.

Brown (2014) suggests that facilitation of the innovation also involves fully explaining the evidence that supports the change to stakeholders. The evidence that supports the intervention will be explained in the Panopto video recording. The Panopto video will thoroughly present current nurse burnout research in an understandable way to the viewer. Evidence that supports the nurse burnout recommendations will be explained throughout the presentation.

**Evaluation**

All evidence-based innovations must be evaluated on their ultimate impact (Brown, 2014). Therefore, the implementation of evidence-based recommendations through the Panopto presentation must be evaluated. This innovation will be evaluated through the journal reflection assignment (See Appendix B).

Students will be required to fill out the weekly journal reflection where they describe the intervention that they implemented. Students will also record their comments about the intervention, such as how each week’s intervention made them feel. The weekly journal will
document the students’ experiences with the eight-week intervention, which could show progress, students’ opinions of the interventions, and other forms of evaluating the 8-week intervention on burnout. The reflection journal will be a source of evaluating the students’ experiences of the intervention.

On week 8 of the reflection journal, students will be asked several questions that evaluate the efficacy of the implementation. The questions will explore the value of the intervention to the student nurses. The survey will evaluate the benefit of the watching Panopto presentation, as well as implementing an evidence-based recommendation for eight weeks. The survey will investigate the value of taking the Big Five Personality Test, as well. The survey will leave a space for the students to write any comments or suggestions regarding the implementation. This evaluation method will reveal the students’ opinions on the efficacy and value of the implementation. The intended outcome of the implementation is that the student nurses will be provided knowledge about nurse burnout, as well as tools and techniques to reduce their risk of developing this hazardous condition.
Conclusion

Chapter Four described a method to implement the evidence-based recommendations designed to reduce nurse burnout. Implementation will target student nurses in their final semester of the University of Arizona Bachelor of Science in Nursing program. Student nurses in their final semester were selected as the target population because new graduate nurses are at the highest risk for burnout (Rudman & Gustavsson, 2011). The goal of this implementation method is to equip student nurses with the proper knowledge and skills to prevent and reduce symptoms of nurse burnout. Students will be required to view a Panopto presentation titled “Nurse Burnout: What this is and how to minimize it in your careers.” Students must also complete a Big Five Personality Test, as well as select one of four evidence-based recommendations to follow for eight weeks. Students will document their experiences in a reflection journal for eight weeks as they implement their chosen evidence-based recommendation. This implementation method will be evaluated by a survey in the reflection journal that determines the efficacy and value of the intervention.
References


Cimiotti, J. P., Aiken, L. H., Sloane, D. M., & Wu, E. S. (2012). Nurse staffing, burnout, and


Appendix A

PowerPoint Presentation for NURS 478 Panopto

Nurse Burnout: What this is and how to minimize it in your careers
Sarah Naves
December 5, 2016

Overview of Presentation
- Background of Nurse Burnout
  - Definition
  - Manifestations
  - Prevalence
  - Outcomes
- What the Research Suggests
  - Organizational Factors In Nurse Burnout
  - Nursing graduate nurse resilience
  - Shift length
  - Leadership
  - Bullying
  - Hardiness
  - Personal Factors in Nurse Burnout
  - Personality dimensions
  - Sleep loss
  - Mindfulness
  - Physical activity
  - Yoga

Background of Nurse Burnout

Nurse Burnout Overview
- State of depletion of resources
- Results from a negative perception of work environment

Christina Maslach and Burnout
- Social psychologist who pioneered:
  - Burnout framework
  - Maslach Burnout Inventory
- Burnout:
  - Results from prolonged stress at job
  - Three essential dimensions:
  1. Emotional exhaustion
  2. Depersonalization
  3. Lack of personal accomplishment

Maslach’s Three Burnout Dimensions
- Emotional exhaustion:
  - Emotional reserves depleted, energy loss
  - No longer can give themselves at psychological level
  - Core dimension of burnout
- Depersonalization:
  - Development of negative attitudes (nagativism and cynicism)
  - Clients and coworkers treated with derogatory approach
- Lack of personal accomplishment:
  - Lack of personal/job competence
  - Feelings of failure in achieving goals
RECOMMENDATIONS TO ADDRESS NURSE BURNOUT

**Manifestations**
- Psychosomatic
  - Insomnia, sleep disturbances
  - Weakness
  - Head/neck pain
- Emotional
  - Depression
- Penalized memory/impairment
- Attitude
  - Discord
  - Isolation
  - Cynicism
  - Powerlessness
  - Exhaustion
- Behavioral
  - Irritability
  - Aggressiveness
  - Relation

**Prevalence**
- Nurses are at risk due to nature of work
  - Intensely involved with clients’ problems
- Systematic review: 42% of general nursing population experienced burnout
  - Currently increasing
- Mixed results regarding risk for different ages and genders

**New Graduate Nurses**
- Several studies associate new graduate nurses with higher levels of burnout
  - Feel inadequately prepared, vulnerable
  - Work stress feelings of frustration and failure
- Nearly one in five nurses reported extremely high levels of burnout during first three years
- Highest average level of burnout is two years post graduation

**Outcomes**
- Professional
  - Negative emotional/physical health
    - Depression, insomnia, obesity, musculoskeletal disorders
  - Negative habits
    - Alcohol abuse, drug abuse, unhealthy eating habits
  - Intra-relationship conflicts and aggression
  - More sick leave, absenteeism, turnover rates
    - In turn, higher health care costs
    - $62,100 - $67,000 per nurse turnover

**What the Research Suggests**
- Patient
  - Diminished quality of healthcare
  - Lower patient satisfaction
  - Association with urinary tract and surgical site infections
  - More patient falls and medication errors
**New Graduate Nurse Residencies**

- Nurse residency programs with preceptors ease transition
  - Preceptors offer emotional, practical, and social support
  - May lead to a decrease in nurse burnout
  - Requires more research
- Recommendation: seek employment that offers new graduate residencies with preceptors

**Shift Length**

- Increase in shift length correlated with increase in nurse burnout
- Job dissatisfaction and burnout up to 2.5 times higher for nurses working shifts over 9 hours
  - Highest among nurses working over 13 hours
- Recommendation: seek employment that offers shifts that are less than 9 hours long

**Leadership**

- Leaders impact various characteristics of work environment that influence nurse burnout
- Nurse burnout decreases with: administrative support, staffing adequacy, improved relations between nurses and physicians, fairness, reward, and resources/information
- Authentic leadership
  - Understand purpose, practice solid values, lead with heart, establish enduring relationship, practice self-discipline
- Transformational leadership
  - Inspire others and work toward goal by transforming others’ attitudes, beliefs, values and motivation
- Recommendation: seek out employment that exhibits these effective leadership values

**Bullying**

- Bullying: intentionally targeting employee through creating negative work environment for them
- Common among nurses
- Bullying experiences correlated with emotional exhaustion and cynicism
- Bullying plays a role in development of burnout, especially among new nurses
- Recommendation: find a workplace that has a zero-bullying policy in place

**Hardiness Education**

- Interventions may be more effective if they enhance nurses’ personalities rather than decreasing environmental stressors
- Hardy personality: active way of understanding person’s relation with others, goals, and problems
  - Associated with lower levels of burnout
  - More optimistic perception
  - Positive coping strategies
- One-hour hardiness education session on effective coping strategies and stress management decreases burnout
- Recommendation: seek employment that develops staff hardiness; develop your own hardiness

**Personality Dimensions**

- Certain personality traits are conducive to development of burnout
- The Big Five personality traits
  - Neuroticism (emotional instability)
  - Agreeableness (tendency to approach or reject others)
  - Conscientiousness (self-control and self-determination)
  - Extraversion (energy and sociability)
  - Openness to experience (curiosity and sensibility)
- More effective coping strategies lead to lower levels of burnout
- Recommendation: explore personality traits using the Big Five Personality Test
RECOMMENDATIONS TO ADDRESS NURSE BURNOUT

Personal Recommendations

Sleep Loss

- According to one study, shorter sleep duration is dose-dependently related to nurse burnout while
- Longer sleep duration is strongly related to lower nurse burnout in linear manner
- Optimal sleep duration is 7 hours or longer
- Causal relationship may not be determined, but these findings are compatible with various studies
- Recommendation: sleep at least 7 hours before and after each working day

Mindfulness

- Mindfulness: ability to observe and experience thoughts, feelings, and bodily sensations
- Full immersion in the present, without judgment
- Cochrane Review: mental relaxation, such as mindfulness, can reduce stress and burnout among healthcare workers
- Several studies reveal mindfulness significantly reduces nurse burnout
  - Even with as little as 10 minutes per day of mindfulness practice
- Recommendation: consistently practice mindfulness, particularly at the workplace

Physical Activity

- Physical activity alleviates symptoms of mental disorders
- Higher levels of physical activity associated with lower levels of burnout among healthcare workers
  - Strong negative correlation of change in physical activity and depression, anxiety, and burnout
- Physical activity decreases in burnout
- Physical activity significantly decreases job-related burnout among patients
  - Determines causation but requires more research
- Opportunity: free Zumba class at the CONI
- Recommendation: partake in a regular exercise program for at least 150 minutes of moderate-intensity exercise per week

Yoga

- Mind-body practices have been shown to decrease levels of nurse burnout
- Yoga provides self-care tools to reduce and manage stress
  - Conscious breathing, postural alignment, calming the body and mind, deep relaxation
- Significantly reduces emotional exhaustion and depersonalization
- Opportunity: free yoga classes at the CONI
- Recommendation: attend at least one professionally-led yoga class for an hour or longer per week

Summary

- Nurse burnout has bad outcomes (for nurses, healthcare organizations, and patients)
- Burnout is extremely prevalent—and increasing
- Many organizational and personal recommendations to consider to prevent and address already-existing burnout

Wrap-Up
Summary of Recommendations

1. Seek new graduate residencies with preceptors
2. Seek shifts that are less than 9 hours long
3. Value effective leadership in the workplace while pursuing employment
4. Find workplace that has a zero-bullying policy
5. Seek employment that develops hardiness, and/or develop your own
6. Explore your Big Five Personality Traits
7. Sleep at least 7 hours before and after each work day
8. Practice mindfulness, especially at workplace
9. Exercise regularly
10. Attend yoga at least once per week

Overall, practice self-care!
Select an evidence-based recommendation to follow for 8 weeks:

- ☐ Sleep at least 7 hours per night before and after a work or school day
- ☐ Practice mindfulness for at least 10 minutes everyday
- ☐ Complete at least 150 minutes of moderate-intensity aerobic exercise per week, such as biking under 9 mph, dancing, jogging, or playing tennis; or complete 60 minutes of vigorous-intensity aerobic exercise per week, such as running, kickboxing, or jumping rope
- ☐ Attend one professionally led yoga class for one hour or longer per week

Complete weekly journal entries:

<table>
<thead>
<tr>
<th>Week</th>
<th>Description of intervention implemented this week (include frequency/length of time):</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comments on activity:</td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comments on activity:</td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comments on activity:</td>
</tr>
<tr>
<td>Week</td>
<td>Description of intervention implemented this week (include frequency/length of time):</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>4</td>
<td>Comments on activity:</td>
</tr>
<tr>
<td>5</td>
<td>Comments on activity:</td>
</tr>
<tr>
<td>6</td>
<td>Comments on activity:</td>
</tr>
<tr>
<td>7</td>
<td>Description of intervention implemented this week (include frequency/length of time):</td>
</tr>
<tr>
<td>Week</td>
<td>Reflection on Panopto presentation and 8-week intervention:</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>8</td>
<td>What did these activities teach you?</td>
</tr>
</tbody>
</table>

Have you noticed any changes in your life since you began this intervention?

Will you do anything differently now? Please explain.

Comments/suggestions:
Please rate how strongly you agree or disagree with these statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Following an evidence-based recommendation to reduce burnout was valuable to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>This 8-week intervention will help me implement preventative strategies for burnout in my career.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>This Panopto presentation titled “Nurse Burnout: What this is and how you can minimize it in your careers” effectively taught me how I can reduce and address nurse burnout in my career.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Completing the Big Five Personality Test was helpful for exploring my risk for nurse burnout.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>