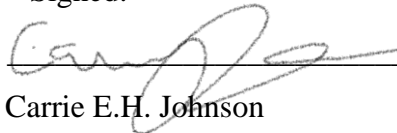|	
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Statement of Academic Integrity

I certify that I am the author of the work contained in this dissertation and that it represents my original research and conclusions. I pledge that apart from my committee, faculty, and other authorized support personnel and resources, I have received no assistance in developing the research, analysis, conclusions, or text contained in this document, nor has anyone written or provided any element of this work to me.

Signed:

Carrie E.H. Johnson   12/12/2022

HOOD COLLEGE

The Impact of Compassion Fatigue on Anxiety and Depression Among Veterinary Nurses: A Study on the Moderating Effect of Compassion Satisfaction

A DISSERTATION

Submitted to the Faculty of the

Graduate School of Hood College

In partial fulfillment of the requirements

for the degree of

Doctor of Organizational Leadership

by

Carrie E.H. Johnson

Frederick, Maryland

2022

DOCTORAL COMMITTEE

The members of the committee appointed to examine the dissertation of Carrie E.H. Johnson find

that this dissertation fulfills the requirements and meets the standards of the Hood College

Doctoral Program in Organizational Leadership and recommend that it be approved.

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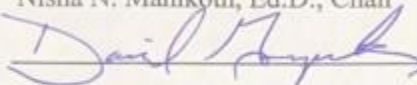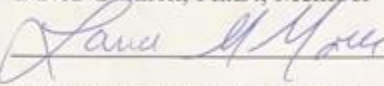   Date

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              Date

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DEDICATION

To all the bright lights in veterinary medicine extinguished too soon, may this dissertation serve as a catalyst for change in our beloved community. To my colleagues and friends still fighting: please never give up, you are enough. We will make a difference.

In loving memory of my grandfather, who always knew I would be a doctor one day; I finally made it.

ACKNOWLEGEMENTS

I am grateful and extremely privileged to be provided with such extraordinary support on this doctoral journey from so many amazing people. I would first like to thank Dr. Manikoth, the chair of my dissertation committee for her unwavering expertise, support, guidance, and dedication throughout this process; your wisdom will stay with me forever. To my committee members, Dr. Moore, Dr. Gurzick, and Dr. Shaine, your generosity of time, knowledge, insight, and encouragement have greatly increased the quality and impact of this work. I also wish to thank Dr. Bands, my longest mentor, for always being a source of light and encouragement.

I am also incredibly grateful for the support I received from my family; your sacrifices and encouragement are the reason I am here today. Thank you for always believing in me and always being my biggest fans. To my dogs, thank you for making me a better human; your wagging tails give me happiness in the worst of days.

Finally, I wish to thank my fellow cohort members; I have learned so much from you in the past three years, here's to many more years of friendship.

The Impact of Compassion Fatigue on Anxiety and Depression Among Veterinary Nurses: A Study on the Moderating Effect of Compassion Satisfaction

Carrie E.H. Johnson, DOL

Committee Chair: Nisha Manikoth, Ed.D.

ABSTRACT

Compassion fatigue, as an occupational psychological hazard, has been studied in many populations, yet there is limited evidence of the impact of compassion fatigue on veterinary nurses and how it contributes to anxiety and depression. This study operationalizes compassion fatigue as the cumulative effect of burnout and secondary traumatic stress and investigates the moderating role of compassion satisfaction in the relationship between compassion fatigue and mental illness constructs of anxiety and depression among veterinary nurses. Data was analyzed using hierarchical multiple regression and moderation analysis. Results indicate moderation effects of compassion satisfaction on the relationship between secondary traumatic stress and mental illness constructs of anxiety and depression. Compassion satisfaction did not moderate the effect of burnout on anxiety and depression. The study makes important theoretical contributions to the understanding of compassion fatigue in the caring professions and offers practical recommendations to veterinary organizations for establishing meaningful ways to engage employees so compassion satisfaction can be maximized to mitigate the effects of compassion fatigue on anxiety and depression.

CHAPTER 1: INTRODUCTION

Individuals working in helping or caretaking roles experience high levels of occupational psychological stress (Bartram & Baldwin, 2010; Monaghan et al., 2020), often leading to the development of mental illnesses such as anxiety and depression (Hegney et al., 2013). Veterinary nurses, in their caretaking roles, provide medical, physical, and emotional care to their animal patients, investing a large amount of physical and emotional energy (Harvey & Cameron, 2020; Meadors et al., 2010; Scotney et al., 2019). In addition to their primary caregiving responsibilities to their animal patients, veterinary nurses often provide emotional support to human clients, increasing their psychological burden. Ongoing exposure to animal patients who are suffering or terminally ill (Rohlf & Bennett, 2005) and relating to the grief of human clients in these situations, often creates lasting impacts of trauma (Scotney et al., 2017, 2019). These exposures can lead to exhaustion, personal relationship conflict, poor well-being, sadness, difficulty sleeping, feelings of guilt and anger (Black et al., 2011). This contributes to significant mental health challenges, resulting in anxiety and depression, placing them at a higher risk of substance abuse and suicide (Bartram et al., 2010; Tomasi et al., 2019; Witte et al., 2019).

There is a growing body of research on the prevalence of compassion fatigue within those in the caring professions (Arimón-Pagés et al., 2019; Gustafsson & Hemberg, 2021; Zhang et al., 2018). More recently, the effects of compassion fatigue have been studied among veterinarians (Bartram, 2019; Ouedraogo et al., 2021; Skipper & Williams, 2012), with focused research on understanding how compassion fatigue impacts overall well-being (Perret et al., 2020a; Scotney et al., 2015; Skipper & Williams, 2012; Deacon & Brough, 2017; Nett, 2015). However, veterinary nurses remain an underrepresented and mostly forgotten demographic deserving

additional attention considering their central role in caring for animal patients and human clients. (Scotney et al., 2019; Harvey & Cameron, 2020)

Veterinary Nurses

The United States Bureau of Labor has predicted for veterinary nurses a growth rate of approximately 20%, from 2016 to 2026, three times that of all other professions (Ilic-Godfrey, 2019; Ruiz, 2019). The onset of the COVID-19 pandemic has also contributed to the growth of the veterinary field, with a 250% increase in pet adoptions, creating additional animal patients with requirements for veterinary care (Ho et al., 2021). This demonstrates the critical role nurses play in a successful veterinary team.

Veterinary nurses have a distinct role in veterinary hospitals, with responsibilities that differ from veterinarians. Notably, veterinarians spend their time quickly moving from one patient to the next, making diagnoses and subsequent treatment plans; in contrast, veterinary nurses spend their time carrying out the directions of veterinarians, with their duties entailing direct patient care (Scotney et al., 2019). General duties of veterinary nurses include collecting medical histories, providing intensive nursing care and emergency aid to animals, administering and monitoring anesthesia, preparing the patient and equipment for surgery, coordinating patient recovery in the post-operative period, administering medications via venous or intramuscular routes, venipuncture, placement of intravenous catheters, suturing, phlebotomy, animal restraint, performing diagnostics, and general hospital husbandry (Kogan, et al., 2020). The full role of a veterinary nurse, however, remains ever changing and largely undefined. Though veterinary nurses' primary role is to care for patients, they often take on responsibilities of a receptionist or kennel assistant while also taking the blame for negative patient outcomes and managing intense human client interactions (Scotney et al., 2019).

In addition to their general roles within the veterinary hospital, Rohlf & Bennett (2005) discuss the distressing aspect of having responsibility within an animal euthanasia setting. Animals euthanized at veterinary clinics are euthanized for a myriad of behavioral and health issues, which are impacting the quality of life for the animal (Black et al., 2011). This aspect of a veterinary nurse's job stands as an example of moral stress in which they are performing a behavior in contrast to their value for caring, causing them distress (Crane et al., 2015; Rollin, 2011; Rohlf, 2018). Moreover, being exposed to or performing euthanasia has frequently been linked to traumatic stress symptoms, which negatively impact worker well-being (Reeve et al., 2007).

Significance of Stress, Burnout, and Mental Health of Veterinary Nurses for Patient Care and Business Performance

In the caretaking professions, the mental health of caregivers is directly associated with overall levels of patient care and client satisfaction (Perrett et al., 2020c). Individuals who are suffering from psychological distress resulting from anxiety and depression often experience a decline in cognitive abilities and information processing, culminating in decreased job performance, lowered quality of patient care (Maharaj et al., 2019), and increased patient mortality (Perrett et al., 2020a). A distinct relationship has also been noted between veterinarian mental health, business performance, and client satisfaction ratings (Perret et al., 2020a) Interestingly, veterinarians with higher client satisfaction ratings often have lowered mental health due to the amount of emotional labor involved with performing their job well (Perret et al., 2020a). The dwindling mental health of veterinarians can have negative impacts on the financial performance of the business due to client dissatisfaction and noncompliance with treatment recommendations (Perret, et al., 2020c).

Similarly, burnout has a detrimental effect on patient care, safety (Perrett et al., 2020b), and business performance (Neill et al., 2022). In general healthcare settings, individuals experiencing burnout are often working extra hours and have higher instances of self-reported medical errors with poorer patient outcomes (Shanafelt et al., 2010). Burnout among veterinarians alters their ability to attend to patients effectively and efficiently, therefore lowering their earning potential and negatively impacting the profitability of the veterinary hospital (Neill et al., 2022). In the United States, costs incurred from burnout experienced by veterinarians and veterinary nurses has an estimated industry deficit of $1 to $2 billion annually (Neill et al., 2022).

A high prevalence of burnout is evident among several populations of veterinary nurses (Harvey & Cameron, 2020; Hayes et al., 2020; Scotney et al., 2019), with evidence of psychological distress from anxiety and depression (Hayes et al., 2020). Among veterinary nurses, the combined effects of anxiety and depression with burnout further decreases productivity and quality of patient care, while also increasing the risks of medical errors and employee attrition (Hayes et al., 2020; Neill et al., 2022).

The Role of Compassion Satisfaction

When faced with frequent emotional challenges over an extended period, individuals may become overly focused on the negative aspects of caregiving. If left unchecked, this can lead to mental illnesses of anxiety and depression (Scotney et al., 2019). Compassion satisfaction, however, has been observed to be a protective factor from occupational psychological risks, and is expressed as the satisfaction of providing care, helping others, and general success (Yildirim, et al., 2020; Duan, et al., 2019). Caregivers who experience higher levels of compassion

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satisfaction reap the rewards of emotional gratification from their ability to provide compassionate care to those who are suffering and traumatized (Stamm, 2010).

Compassion satisfaction has a direct impact on patient safety and outcomes, in general healthcare (Pedfoyo & Wodchis, 2013; Duan, 2019) and veterinary medicine (Perrett et al., 2020c). Among veterinarians (Perrett et al., 2020c) and veterinary nurses (Scotney et al., 2019) individuals experiencing higher levels of compassion satisfaction were less impacted by the effects of compassion fatigue, anxiety, and depression.

Statement of the Problem

Veterinary nurses function under extremely traumatic and emotional circumstances with expectations to remain stoic, and frequently receive no support from the leadership team (Neill et al., 2022; Scotney et al., 2019). This contributes to many individuals affected by compassion fatigue due to traumatic exposures, suffering in silence, leading to more serious mental health issues. Specifically, individuals have been found to suffer from increased levels of anxiety, depression, substance abuse, and suicidality (Bartram et al., 2020; Perrett et al., 2020b). The emotional, mental, and physical impacts on veterinary nurses will ultimately have a detrimental impact on the overall financial performance of veterinary practices. O'Brien et al. (2021) is the only study available for review comparing mental health as it affects both veterinarians and veterinary nurses, with results indicating veterinary nurses experience anxiety and depression at worse rates than their veterinarian counterparts. While several studies (Bartram et al., 2020; Chigerwe et al., 2020; Ouedraogo et al., 2019; Perrett et al., 2020a, 2020b, 2020c) have focused on compassion fatigue and psychological distress symptoms caused by anxiety and depression among veterinarians, there is scarcity in the literature relating how these conditions impact veterinary nurses.

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The acceptance and overall prevalence of compassion fatigue within the veterinary field, in combination with the impact it has on those involved has sparked a large amount of research within the past ten years (Bartram, 2019; Chigerwe et al., 2019; Ouedraogo et al., 2020, Perrett et al., 2020b, 2020c; Scotney et al., 2019). Such research has been dedicated to understanding compassion fatigue in veterinarians and how this impacts their overall well-being (Perret et al., 2020; Scotney et al., 2015; Deacon & Brough, 2017; Nett, 2015). Despite their crucial roles as primary caretakers of animal patients and support systems for veterinarians, veterinary nurses are an underrepresented and mostly forgotten demographic of veterinary medicine, and should be included when addressing compassion fatigue and other occupational psychological hazards (Scotney et al., 2015).

Veterinary nurses serve as caretakers to both their animal patients and their human counterparts in relation to the patients (Harvey & Cameron, 2020). Such a position indicates that they experience not only the physical pain of taking care of their patients, but also the emotional and psychological pain associated with the human owners (Black et al., 2011). The combined burden of human and animal pain contributes to higher levels of exhaustion, personal relationship conflict, poor well-being, sadness, difficulty sleeping, feelings of guilt and anger (Black et al., 2011; Harvey & Cameron, 2020).

Theoretical Framework

The concept of compassion fatigue was developed in 1982 by Charles Figley and has been defined as the "cost of caring" for others that are in physical and emotional pain. Figley (2001) created the compassion fatigue and stress model in which he describes compassion as "bearing the suffering of others" (Figley 2002, p. 1434). Figley also coined the most-widely accepted definition of compassion fatigue to date: "a state of tension and preoccupation with

traumatized patients by re-experiencing traumatic events, avoidance/numbing of reminders and persistent arousal associated with the individual. Stamm (2002, 2010) has continued the work of Figley, attempting to better explain the dynamics of compassion fatigue. Compassion fatigue, as conceptualized by Stamm (2010), encompasses two distinct conditions of burnout and secondary traumatic stress. Within Stamm's (2010) framework, an individual must be suffering from both the emotional and traumatic effects of burnout and secondary traumatic stress in order to experience the full effects of compassion fatigue.

In this study, I will be using Compassion Fatigue (CF) and Compassion Satisfaction (CS) as conceptualized by Stamm (2010). The study will also utilize constructs of mental illness, including anxiety (ANX) and depression (DEP), as defined in the Diagnostic and Statistical Manual of Mental Illnesses, DSM-5 TR (American Psychiatric Association, 2022).

Stamm (2010) defines compassion fatigue as "the cumulative effects of burnout and secondary traumatic stress, ultimately causing exhaustion, frustration, anger and depression, and a negative feeling driven by fear and work-related trauma" (p. 12)

Stamm (2010) defines burnout as

> "One element of the negative effects of caring known as compassion fatigue...burnout is associated with feelings of hopelessness and difficulties in dealing with work or doing your job effectively. These...usually have a gradual onset...They can reflect the feeling that your efforts make no difference, or they can be associated with a very high workload or non-supportive environment" (p. 13).

Stamm (2010) defines secondary traumatic stress (STS) as

> "An element of compassion fatigue...about work-related secondary trauma exposure to people who have experienced extremely or traumatically stressful events...negative effects may include fear, sleep disturbances, intrusive images, or avoiding reminders of the person's traumatic experience" (p.13).

Stamm (2010) defines Compassion Satisfaction as

> "The pleasure you derive from being able to do your work well...you may feel like it's a pleasure to help others through your work. You may feel positively about your colleagues or your ability to contribute to the work setting or even the greater good of society" (p. 12).

The American Psychiatric Association (2022) identifies anxiety as a mental illness that is defined by excessive worry and apprehension about expectations about events, activities, work, or performance, that occur for most days for at least six months. Anxiety is associated with three or more the following symptoms, including restlessness or feeling on edge, fatigue, difficulty concentrating or lack of thoughts, general irritability, muscle tension, and sleep disturbances (American Psychiatric Association, 2022). For an individual to be diagnosed with anxiety, they must be experiencing increased feelings of tension, recurring intrusive thoughts or concerns. Physical symptoms of anxiety include hyperhidrosis, tachycardia, dizziness, difficulty concentrating, muscle tension, restlessness, fatigue, and sleep disturbances (American Psychiatric Association, 2022).

The American Psychiatric Association (2022) identifies a depressive episode with persistent feelings of sadness, hopelessness, and loss of interest in previously enjoyed activities

for a period of two weeks or more. Symptoms of a depressive episode include lowered mood for most of the day, diminished interest in activities, significant weight loss or weight gain, abnormal fluctuations in appetite, slowed thought processes and decline in physical movement that is observed by others, fatigue or loss of energy nearly every day, feelings of worthlessness or excessive and/or inappropriate guilt, diminished ability to concentrate or make decisions, and recurrent thoughts of death, recurrent suicidal ideation without a specific plan or suicide attempt, or a specific plan for committing suicide (American Psychiatric Association, 2022). Depressive episodes are also closely associated with symptoms characteristic of clinically significant distress, including impairment in all facets of life; these symptoms must not be a direct result of another medical condition or substance abuse (American Psychiatric Association, 2022).

Purpose of the Study

The primary purpose of this research is to examine the prevalence of compassion fatigue, anxiety, and depression in a population of veterinary nurses and to understand the relationship between compassion fatigue, anxiety, and depression. The secondary intent of this study is to explore the role of compassion satisfaction in the relationship between compassion fatigue, anxiety, and depression. Many individuals suffer from these devastating conditions in silence, contributing to the increasing suicide rates of veterinary staff. Understanding the impact of compassion fatigue on depression and anxiety, as well as the role compassion satisfaction has in this relationship will add to the literature on the outcomes of compassion fatigue in the helping professions and will provide input for veterinary hospitals to consider organizational interventions that will maximize levels of compassion satisfaction to prevent severe mental health issues.

<center>**Overview of Research Methodology**</center>

In this study, I utilized a non-experimental, cross-sectional survey design to a) examine the prevalence of compassion fatigue, anxiety, and depression; b) to analyze the relationship among compassion fatigue, anxiety, and depression; and c) to examine the potential moderating effect of compassion satisfaction in those relationships.

Data Collection Methods and Instrumentation

The study utilized subscales from Stamm's (2002) Professional Quality of Life Scale (ProQOL-5 to measure compassion satisfaction, and compassion fatigue. Kroenke and Spitzer's (2002) nine item Patient Health Questionnaire (PHQ-9) was be used to measure depression, and Spitzer and Kroenke's (2006) seven item Generalized Anxiety Disorder scale (GAD-7) to measure anxiety. In addition, items were included in the survey to address control variables including age, tenure, gender affiliation, salary level, race, ethnicity, position, hospital size, tobacco, and alcohol usage, perceived organizational support, lifetime experiences, and responses to the COVID-19 pandemic.

Instruments

Professional Quality of Life Scale

This study utilized Stamm's (2002, 2010) Professional Quality of Life Scale (ProQOL) to measure compassion fatigue, comprised of burnout and secondary traumatic stress, and compassion satisfaction. Professional quality of life refers to the "quality one feels in relation to their work as a helper" (Stamm, 2002, 2010) and consists of compassion fatigue and compassion satisfaction. Compassion fatigue is divided further into two components: burnout and secondary traumatic stress. Collectively, burnout and secondary traumatic stress culminate in the concept of compassion fatigue (Stamm, 2002, 2010). The ProQOL is a well validated ($\alpha = 0.86$), self-

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response instrument, containing thirty questions that address three distinct concepts of burnout, secondary traumatic stress, and compassion satisfaction.

Generalized Anxiety Disorder Scale (GAD-7)

Anxiety was assessed using the Generalized Anxiety Disorder scale (GAD-7) as developed by Spitzer and Kroenke (2006). Anxiety is characterized as a mental illness that includes increased feelings of tension, recurring intrusive thoughts or concerns. Physical symptoms of anxiety include hyperhidrosis, tachycardia, dizziness, difficulty concentrating, muscle tension, restlessness, fatigue, and sleep disturbances (American Psychiatric Association, 2022). The GAD-7 is one of the most validated assessment tools of its kind and is powerful in assisting clinicians with diagnosing anxiety and its severity (Spitzer, et al.,2006). The GAD-7 contains seven items that are based directly on the diagnosis of generalized anxiety disorder in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5 TR).

Patient Health Questionnaire (PHQ-9)

Depression was assessed with the nine-item Patient Health Questionnaire (PHQ-9) as developed by Spitzer et al. (2001). Depression is one of the most prevalent and treatable mental health disorders and is classified as a serious mood disorder causing individuals to suffer from low mood and motivation, persistent sadness, low self-esteem levels, as well as physical symptoms such as chronic pain or digestive issues (American Psychiatric Association, 2022). Moreover, depression stands as an established risk factor for suicide (Nett, et al., 2015). The PHQ-9 is one of the most validated assessment tools of its kind and is powerful in assisting clinicians with diagnosing depressive episodes, determining severity, and overall impact to daily life (Spitzer, et al., 2001). The PHQ-9 contains nine items that are based directly on the diagnosis

of major depressive disorder in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5 TR).

Population and Sample

The population of the study was veterinary nurses in North America. Respondents were veterinary nurses who were motivated by their own interest in the veterinary field, and a desire to assist with the research effort. To achieve purposive sampling, a recruitment strategy was adopted with targeted outreach to veterinary nurses in the United States and Canada through the following platforms:

1. A large regional veterinary conference for veterinary nurses spanning a total of four days.
2. A large statewide veterinary nurse association with access to 1,000 members.
3. Three leading influencers in North America in the veterinary nursing/veterinary wellbeing profession, with a request to share details about my research study on their social media platforms and professional networks.

The survey was available between December 2021 and February 2022.

Ethical Procedures

Participants were required to give informed consent for participation, with the understanding that their responses were handled with confidentiality. Respondent names were not collected; however, information regarding personal, employment, and workplace characteristics was collected for inclusion as control variables.

Procedures for Data Analysis

Statistical analysis began with the summation and averaging of scores for secondary traumatic stress (STS), burnout (BO), compassion satisfaction (CS), anxiety (AX), and depression (DP). STS and BO scores were utilized separately as distinct concepts. Anxiety and depression scores were evaluated individually. CS scores were also classified individually, as this is a distinct concept.

After assuring data and statistical assumptions were met, hierarchical multiple regression was performed. Regression analysis was the appropriate analytical technique as independent and dependent variables were measured on a continuous scale. More specifically, hierarchical multiple regression analysis, as an advanced form of linear regression, was appropriate since I was seeking to explain if the independent variables of burnout and secondary traumatic stress had a statistically significant amount of variance on my dependent variables, anxiety, and depression, after accounting for control variables that address personal, employment, and workplace factors.

Research Questions

Research Question 1 (RQ1): What is the effect of compassion fatigue on anxiety among a population of veterinary nurses after controlling for personal, workplace, and employment factors?

Research Question 2 (RQ2): What is the effect of compassion fatigue on depression among a population of veterinary nurses after controlling for personal, workplace, and employment factors?

Research Question 3 (RQ3): How does Compassion Satisfaction (CS) moderate the relationship between Compassion Fatigue and Anxiety among a population of veterinary nurses?

Research Question (RQ4): How does Compassion Satisfaction (CS) moderate the relationship between Compassion Fatigue and Depression among a population of veterinary nurses?

Hypotheses

Hypothesis 1a: Burnout accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables.

Hypothesis 1b: Secondary traumatic stress accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables and burnout.

Hypothesis 2a: Burnout accounts for a statistically significant amount of variance in Depression after accounting for all control variables.

Hypothesis 2b: Secondary Traumatic stress accounts for a statistically significant amount of variance in Depression after accounting for all control variables and burnout.

Hypothesis 3a: Compassion Satisfaction moderates the relationship between Burnout and Anxiety among a population of veterinary nurses, with the strength of the relationship between Burnout and Anxiety reducing as Compassion Satisfaction increases.

Hypothesis 3b: Compassion Satisfaction moderates the relationship between Secondary Traumatic Stress and Anxiety among a population of veterinary nurses, with the strength of the relationship between Secondary Traumatic Stress and Anxiety reducing as Compassion Satisfaction increases.

Hypothesis 4a: Compassion Satisfaction moderates the relationship between Burnout and Depression among a population of veterinary nurses, with the strength of the relationship of Burnout and Depression reducing as Compassion Satisfaction increases.

Hypothesis 4b: Compassion Satisfaction moderates the relationship between Secondary Traumatic Stress and Depression among a population of veterinary nurses, with the strength of the relationship between Secondary Traumatic Stress and Depression reducing as Compassion Satisfaction increases.

Conceptual Model

Figure 1 outlines the relationship of compassion fatigue, comprised of burnout and secondary traumatic stress, with anxiety, indicating the hypothesized moderating effect of compassion satisfaction.

Figure 1

Conceptual Model Indicating Relationship of Burnout and Secondary Traumatic Stress with Anxiety, as Moderated by Compassion Satisfaction
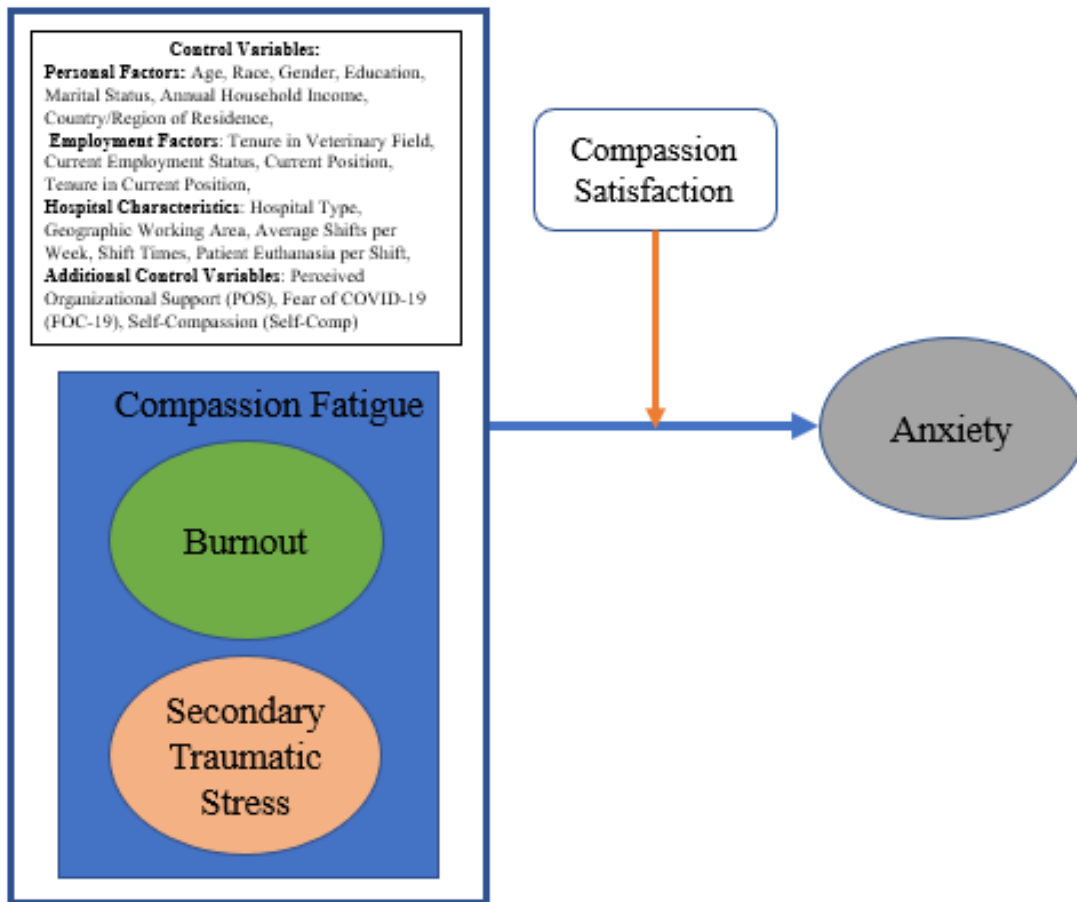
Figure 2 outlines the relationship of compassion fatigue, comprised of burnout and

secondary traumatic stress, with depression, indicating the hypothesized moderating effect of

compassion satisfaction.

Figure 2

Conceptual Model Indicating Relationship of Burnout and Secondary Traumatic Stress with
Depression, as Moderated by Compassion Satisfaction
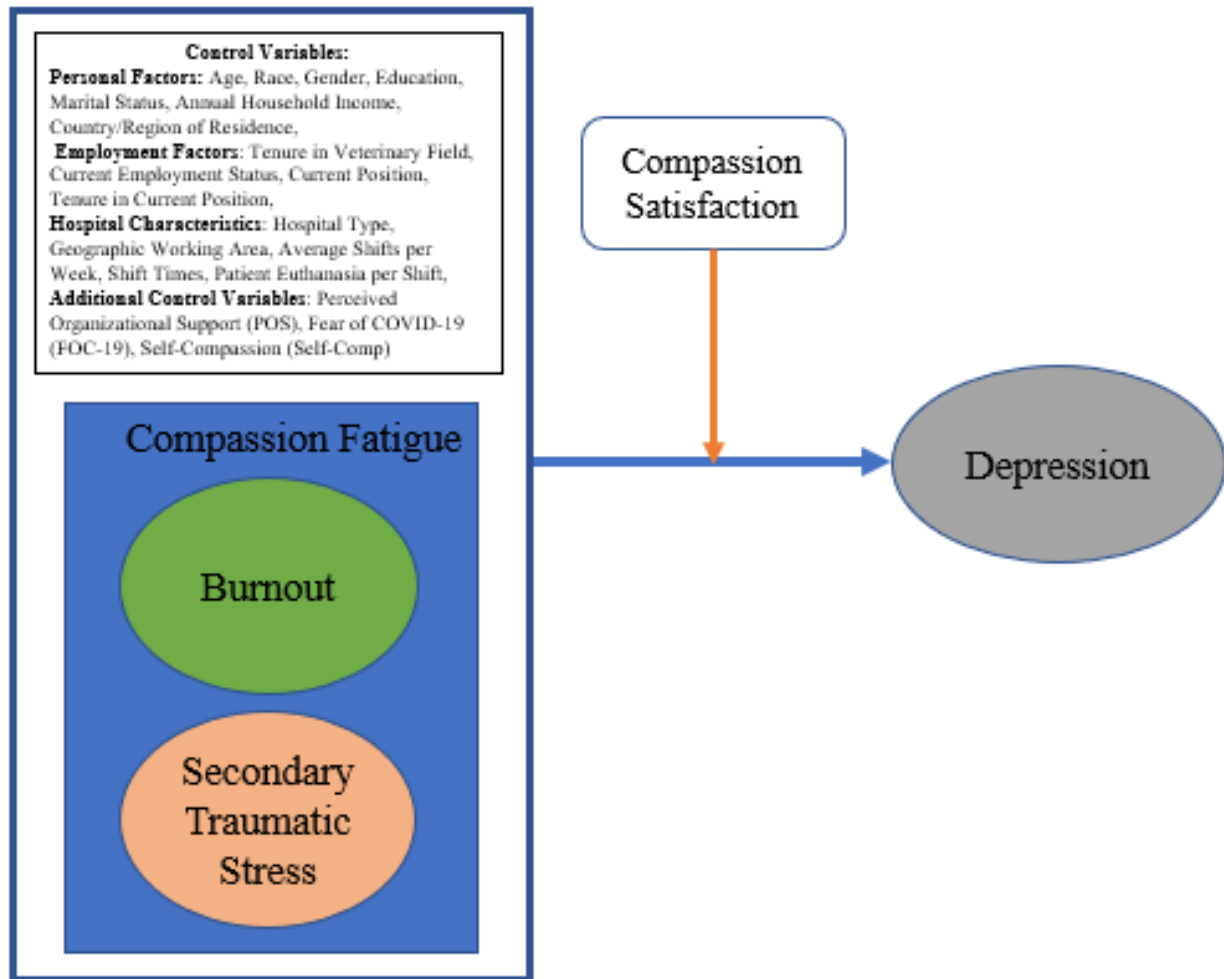
Limitations

The current study design also considered potential for validity and limitations. Conclusion validity, as defined by Maruyama and Ryan (2014), is the degree to which our data analyses permit us to draw appropriate conclusions about the relationships of independent and dependent variables. Several aspects of the study allow for moderate conclusion validity.

Remaining aligned with other research studies, this study is not without limitations. The constructs of this study, while they are well tested and have evidence of strong psychometric properties, were measured using self-reported instruments. Temporal sequence was not addressed in the designed study and was reasonable threat to internal validity due to the cross-sectional survey design. The correlation of compassion fatigue with anxiety and depression does not indicate complete causality, as there are many other factors to consider. Controls were added to regression analysis to address spuriousness. However, it was impossible to address all control variables that impact the levels of anxiety and depression among a population of veterinary nurses. Lastly, since a non-representative sample was used, generalizability should be addressed with caution.

Significance of the Study

This study has significance for caring professions in general, and veterinary nurses in specific, therefore offering perspectives on the relationship of compassion fatigue with anxiety and depression and how compassion satisfaction can be used as a mechanism to mitigate anxiety and depression. The findings contribute to organizational literature on well-being for the caring professions, encouraging employers and leaders to improve organizational culture and current employee support programs. Without major adjustments to preexisting workplace demands and environment, veterinary staff will continue to suffer and potentially succumb to their mental or

physical ailments, causing decline in overall business revenue due to decreased team effectiveness and productivity, increased turnover, medical mistakes, drug diversion, and chronic absenteeism.

Definition of Key Terms

Anxiety: mental illness defined by excessive worry and apprehension about expectations about events, activities, work, or performance, that occur for most days for at least six months.

Burnout: exhaustion of physical and/or emotional strength due to prolonged stress and frustration; occurs over time and not connected with specific event.

Compassion fatigue: cumulative effects of secondary traumatic stress and burnout exhaustion due to compassion stress and the demands of being empathetic.

Compassion satisfaction: sense of fulfillment from work.

Depression: persistent feelings of sadness, hopelessness, and loss of interest in previously enjoyed activities for a period of two weeks or more.

Mental Illness: the onset of any level of anxiety and depression.

Occupational stress: psychological stress caused by a misalignment of skills and/or expectations in the workplace.

Professional Quality of Life: quality an individual feels in relation to their work as a helper.

Psychological stress: managing memory of traumatizing stressor.

Secondary traumatic stress (STS): caregiver's stress, occurs from assisting primary trauma survivors with empathy and compassion.

Self-compassion: The ability to understand one's struggles as part of the human condition.

Summary

This chapter has explained the framework of compassion fatigue as developed by Figley (1995) and further conceptualization by Stamm (2010), in addition to how this affects veterinary nurses, placing them at a higher risk of developing mental illnesses of anxiety and depression. The implications of compassion fatigue, anxiety, and depression were explained in terms of how they impact overall patient care and veterinary hospital profitability. Veterinary nurses are key contributors to patient care, client satisfaction, and general workplace productivity. However, as employees of the veterinary field, veterinary nurses work long hours and are exposed to many workplace stressors that frequently invoke traumatic or emotional responses. Such conditions create a predisposition for the development of compassion fatigue, anxiety, and depression, ultimately leading to increased suicidality, substance abuse, and decreased levels of compassion satisfaction. This study contributes to theory and practice by examining the impact of compassion fatigue and compassion satisfaction on anxiety and depression in veterinary nurses, a population that is understudied and not represented well in the literature.

Organization of Dissertation

Chapter 1 gave a detailed introduction to the problem of mental health issues such as anxiety and depression among veterinary nurses and how it impacts overall patient care and veterinary hospital profitability. The need to study how compassion fatigue and compassion satisfaction impact anxiety and depression were discussed. The study's purpose, significance, methodology, and limitations were summarized. Subsequent chapters will present a well-rounded

review of literature, detailed methodology, analysis of results, and finally, a discussion of the

results, with implications and conclusions.

CHAPTER 2: LITERATURE REVIEW

This study sought to understand the relationship between compassion fatigue, anxiety, and depression among a population of veterinary nurses. This study also intended to explore the role of compassion satisfaction in the relationship of compassion fatigue with mental illness constructs of anxiety and depression. Such conditions are widespread throughout the veterinary field and inflict great distress among veterinary nurses who often suffer in silence. The unfortunate impacts of compassion fatigue, anxiety, and depression lead to increasing rates of suicide among veterinary nurses. Developing a greater understanding of how compassion fatigue, anxiety, and depression affect veterinary nurses, and the role of compassion satisfaction in this relationship, will add to the literature on the outcomes of compassion fatigue in the helping professions. This information will also provide input for veterinary hospitals to consider positive organizational interventions to maximize levels of compassion satisfaction.

The literature review is organized into several sections. First, I will explain the methodology for conducting my literature search. This is followed by a review of the constructs of compassion fatigue, compassion satisfaction, anxiety, and depression. Empirical literature on each of these constructs is presented, highlighting the studies in the veterinary professions. I discuss factors that impact these constructs, and then discuss the relationships between each of the independent variables of burnout and secondary traumatic stress, the moderating variable of compassion satisfaction, and the dependent variables of anxiety and depression, concluding with the hypotheses of my study and rationale for added control variables. Finally, I provide a summary of the empirical literature on compassion fatigue, compassion satisfaction, anxiety, and depression among veterinary nurses and indicate the gap in the literature that necessitates my study.

Literature Search

A systematic search was conducted of academic literature on the constructs of compassion fatigue and compassion satisfaction, and the literature that examined these constructs in combination with anxiety and depression for those in the caring professions, in general, and those the veterinary field, specifically. I searched databases such as PsychINFO, Academic Search Complete, and ERIC for search terms of "compassion fatigue", "burnout", "secondary traumatic stress", and "compassion satisfaction", followed by each of these search terms in combination with "anxiety" or "depression". Articles related to social work, pastoral care, healthcare, education, and veterinary care were available after using the previous search terms.

After extracting seminal literature and the most cited literature on this topic, I continued to probe deeper into this body of literature for articles about general healthcare nurses, veterinary care in general, and veterinary nurses specifically, using search terms of "veterinary nurse", "veterinary" OR "nurse" to the search terms mentioned earlier. In addition to searching databases, I also looked specifically within research and practitioner journals within the veterinary field such as the American Journal of Veterinary Research (AVMA), Veterinary Nursing Journal, Journal of Veterinary Medical Education, Irish Veterinary Journal, Journal of Traumatology, Canadian Veterinary Journal, and British Veterinary Journal.

Compassion Fatigue

Compassion is described as the emotion experienced when a person is impacted by the distress of another and is the foundation of caring in the healthcare industry (Hooper, et al., 2010; Potter, et al., 2010). The development of compassion fatigue begins with the caretaker providing care to a suffering patient, with willingness to help, and the ability to remain empathetic and compassionate. When prolonged exposure to intensive and high acuity patient

care situations occurs, an individual's ability to provide care, general energy, and empathy decreases, lessening their ability to remain compassionate (Pehlivan & Guner, 2018). When compassion places a significant burden on healthcare providers, compassion fatigue ensues (Figley, 2002, 2007). Many individuals in the caring professions are at an increased risk of developing compassion fatigue: health professionals, social workers, teachers, lawyers, judges, emergency medical personnel, and religious workers (Pehlivan & Guner, 2019).

The condition of compassion fatigue was first defined by Charles Figley (1982) as "the cost of caring" (p. 4). Joinson (1992) recognized the condition as a decline in the ability to nurture or provide care, and identified specific behaviors associated with compassion fatigue such as chronic fatigue, irritability, dread of going to work, aggravation of physical conditions, and a general lack of joy in life in her study of emergency nurses. Figley (2002) continued to develop the description of compassion fatigue, classifying it as a "state of tension and preoccupation with the traumatized patients…. a function of bearing witness to the suffering of others" suggesting it can occur suddenly or over time, and often occurs without warning, causing a sense of helplessness and confusion (p. 1435). Compassion fatigue is defined as the cost of caring for others, the direct consequence of giving consistently high levels of energy and compassion over an extended period, generally without positive outcomes (Figley, 2002; McHolm, 2006; Potter et al., 2010; Pehlivan & Guner, 2018), resulting in cynicism at work, depression, and other stress-related illnesses (Figley, 1982; McHolm, 2006; Mathieu, 2007). Compassion fatigue has been explored in the context of empathetic or vicarious responses of professionals working closely with trauma patients (Figley, 1995; Kassam-Adams, 1995; Nimmo, 2013).

Figley's (1995, 2002) work on compassion fatigue served as a gateway to the evolution of the construct and empirical studies examining antecedents and consequences of compassion fatigue. Stamm (2005) further developed Figley's (1995, 2002) work on compassion fatigue and proposed that compassion fatigue is the cumulative effect of burnout and secondary traumatic stress.

Compassion fatigue has been conceptualized in various ways and the current understanding of compassion fatigue has developed over time. Other common names of compassion fatigue include secondary victimization (Figley, 1982), secondary traumatic stress (Figley, 1983, 1985, 1990; Stamm 1995,1997), vicarious traumatization (McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995), and secondary survivor syndrome (Remer & Elliott, 1988). Though these constructs overlap in etiology, they lack cohesion in content or theoretical foundations (Bride & Figley, 2007; Shoji et al., 2015).

As research on compassion fatigue has developed, secondary traumatic stress has become understood as a facet of compassion fatigue, rather than a term to describe compassion fatigue (Thomas & Wilson, 2004; Nimmo, 2013). The overlap in the definition and symptoms of secondary traumatic stress and compassion fatigue makes it difficult to differentiate between the two conditions (Nimmo, 2013). However, conceptualization of compassion fatigue has progressed to encompass the simultaneous experiences of emotional duress from traumatic symptoms and components of burnout (Figley, 1995). Previous studies have also compared compassion fatigue as a type of burnout, however, the primary difference between these conditions is the velocity of onset; compassion fatigue is an acute onset, while burnout is a gradual onset (Portnoy, 2011; Hunsaker et al., 2014).

The conceptualization of compassion fatigue has been further clarified by Stamm (2010), to note that it encompasses burnout and secondary traumatic stress. Several others (Arimon-Pagés et al., 2019; Scotney et al., 2019; Harvey & Cameron, 2020; Hill et al., 2020; Ouedraogo et al., 2021), have indicated that for an individual to be experiencing the full effects of compassion fatigue, they must be suffering from the effects of both burnout and secondary traumatic stress.

Secondary Traumatic Stress

Secondary traumatic stress, as defined by Stamm (2010), is the impact of secondary exposure to traumatic experiences of people who have experienced a traumatic event first-hand. This condition is characterized as a stress response resulting from knowing about or witnessing the trauma experienced by others (Bride et al., 2004; Figley, 1995; Figley 2002; Huggard, 2003; Nimmo, 2013). An encounter with a traumatized patient or client, who is suffering from direct or primary trauma, can evoke emotional distress for caregivers with acute development of secondary traumatic stress (Bride et al., 2009). This sudden development presents symptoms of invasive thoughts, hypervigilance, and avoidance (Scotney et al., 2017; Ouedraogo et al., 2021).

There are several workplace factors that can negatively influence an individual's ability to cope with secondary traumatic stress; however, the exposure to patient suffering and death has proven to be the most influential force in development of secondary traumatic stress (Orru, et al., 2021; Black et al., 2011; Overfield, 2012; Hill et al., 2020). Evidence has also been found to confirm that working more shifts each week, and longer hours, contributes to the overall exposure of an individual to other's traumatic experiences, ultimately acting as a predictor of secondary traumatic stress (Lee et al., 2021). Hill et al., (2020) concluded that levels of secondary traumatic stress are highest among individuals working more than 40 hours per week.

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Organizational support systems such as grief and loss training, workshops, supervision, and debriefs prior to the secondary exposure to patient trauma is a notable protective factor of secondary traumatic stress; individuals with access to such resources before and after an event, generally have lower levels of secondary traumatic stress (Oginska-Bulik et al., 2021). Arimon-Pages et al. (2019) has indicated similar results, suggesting a lack of specialized training regarding emotional management is associated with higher levels of secondary traumatic stress.

Evidence of personal factors that directly impact secondary traumatic stress among caregivers is limited and conflicting. An individual's age and years of experience, for example, have shown significant differences in secondary traumatic stress of younger nurses compared to older nurses (Salimi et al., 2020; Hill et al., 2020), but has not shown any differences in several other studies (Diehm et al., 2019; Ouedraogo et al., 2021). Rather, predictors of secondary traumatic stress are more intrinsic to the individual's ability to cope with difficult situations (Neff et al., 2020).

Personal traumatic experiences can provide a predisposition to developing secondary traumatic stress (Sodeke-Gregson et al., 2013). However, self-compassion and mindful self-care have been shown to act as a notable protective factor against secondary traumatic stress (Neff et al., 2020). An individual's ability to provide themselves with proper care and utilize coping mechanisms after exposure to patient traumas, has been shown to decrease overall levels of secondary traumatic stress (Neff et al., 2020; Oginska-Bulik & Michalska, 2021). Additionally, psychological resilience, or the ability to recover from stress or a traumatic situation, has recently surfaced as a personal factor of secondary traumatic stress, with indication that this relationship is mediated by the presence of burnout (Oginska-Bulik & Michalska, 2021).

Previously mentioned control variables of perceived organizational support (Eisenberger, 1986), hospital type, geographical work setting, hours worked per week, shifts worked per week, general work times, and exposure to patient euthanasia will also address workplace factors of secondary traumatic stress. Additional control variables of respondent age, gender, race, annual household income, highest educational level, and self-compassion (Neff, 2003), in addition to previous mental health support were added to address personal factors relating to the development of secondary traumatic stress and anxiety.

Burnout

Burnout is a common psychological syndrome involving an extended response to recurring interpersonal stressors while at work, and is generally characterized by overwhelming exhaustion, cynicism, job detachment, sense of ineffectiveness, and lack of accomplishment (Maslach & Leiter, 1997). The gradual onset of burnout has been noted as the most well-established measure of stress and distress (West et al., 2006; Bhutani, 2012). Emotional exhaustion is the core element of burnout, causing caretakers to mentally distance themselves from their work, leading to a pessimistic and bitter attitude, and is accompanied by cynicism and depersonalization (Storlie, 1979; Schaufeli & Greenglass, 2001; Bakker et al., 2005; Leiter et al., 2006; Epp, 2012; Kogan et al., 2020). Emotional exhaustion makes it impossible for an individual to imagine a world where they can remain effective (Demerouti et al., 2001; Lee & Ashforth, 1990). Lack of self-efficacy negatively colors a person's view of their current position job with personal beliefs (Stamm, 2002). Burnout is often the result of a discrepancy between the nature of an individual's job, and the nature of the individual performing the job, arising gradually and through daily workplace experiences, generally without a traumatic experience (Bellolio et al., 2014; Orru et al., 2021).

Job-related stressors are the most common antecedent of burnout among healthcare providers, often leading to mental illness (Aronsson et al., 2017; Henson et al., 2020). Previously identified precursors to burnout include excessive workloads, high patient ratios, workplace setting, reduced autonomy and decision latitude, poor social and organizational support systems, working patterns (Dall'Ora et al., 2020), and exposure to patient deaths (Rodriguez-Rey et al., 2018).

In many studies, excessive workload has been greatly associated with emotional exhaustion (Flynn et al., 2009; Kowalski et al., 2010; Konstantinou et al., 2018; Leiter & Maslach, 2009), and acts as a predictor of physical and mental fatigue that causes burnout (Higashiguchi, 2005; Greenglass et al, 2001).

High patient ratios are a contributor to provider burnout and have implications for patient outcomes and safety (Baier et al., 2018; Lima-Garcia et al., 2019; Schlak et al., 2021). Additionally, high patient ratios create time pressure for providers to complete their medical and administrative tasks such as patient documentation and plays a distinct role with burnout to negatively impact patient safety outcomes (Teng et al., 2010; Yun & Son, 2019). Higher levels of provider burnout have also been associated with greater frequency of medication errors (Halbesleben et al., 2008), surgical-site infections (Cimiotti et al., 2012), and patient falls (Nantsupawat et al., 2016). Workplace setting also plays a distinct role in burnout; nurses working within intensive care units, emergency rooms, medicine, and operating rooms have been found to experience burnout at greater levels than their counterparts in other departments (Wang et al., 2015).

In healthcare, autonomy in the workplace represents the providers' ability to problem solve situations that affect the quality of patient care (Nogueira et al., 2019). Workplace

autonomy and decision latitude has been shown to be a protective factor in the development of burnout, also having implications for overall job-satisfaction (Shirom et al., 2006; Coyle et al., 2005; Nogueira et al., 2019). Autonomy, as a protective factor (Shirom et al., 2006; Coyle et al., 2005; Nogueira et al., 2019) is seen as a facet of organizational support, which is also found to be a contributor to the development of burnout (Madathil et al., 2014; Srivastava & Agrawal, 2020; Labrague et al., 2018; Hunsaker et al., 2015).

Working patterns, such as irregular hours and higher numbers of shifts have been associated with greater levels of burnout, and act as a predictor of the development of burnout (Bagheri et al., 2019), specifically among individuals working night-shift hours, compared to those working dayshift hours (Gandi et al., 2011; Ruiz-Fernandez et al., 2019). Additionally, working shifts of twelve hours or more have been predictive of higher levels of burnout and anxiety (Dall'Ora et al., 2015). Rotating shift work can also provoke higher levels of burnout, as it disrupts circadian rhythms and decreases sleep quality, causing loss of concentration and behavioral changes (Vidotti et al., 2018; Zencirci et al., 2011). Alternatively, schedule flexibility, including time away from work, has been proven to reduce levels of burnout, acting as a protective factor (Dhaini et al., 2018; Poncet et al., 2007; Wisetborisut et al., 2014). Hill et al. (2020) has indicated burnout was highest among individuals working greater than 40 hours per week.

Repeated exposure to patient deaths has been shown to increase burnout among healthcare providers (Rodriguez-Rey et al., 2018). Such exposures and experiences of providers increase emotional distress symptoms, therefore decreasing ability for self-regulation and active coping strategies (Gribben et al., 2019).

Though job-related factors have a large impact on burnout among healthcare professionals, there are several personal characteristics that can predispose individuals to the development of burnout. Factors of age, gender, length of service (Scotney et al., 2019; Fuente-Solana et al., 2020), race (Swamy et al., 2020), financial stress (Porter et al., 2018), educational level (Wang et al., 2020); and self-compassion (Galiana et al., 2022).

Studies have indicated younger ages have been associated with higher levels of burnout (Scotney et al., 2019; Edmonds et al., 2012). Younger individuals often have higher levels of motivation to perform their jobs well (Gomez-Urquiza et al., 2017; Mollart et al., 2013; Taleghani et al., 2017), but lack the ability to cope with workplace stressors due to less of training and experience (Aydin-Sayilan et al., 2020; Tam et al., 2004; Zhang et al., 2020), therefore placing them at a greater risk of developing burnout (Hill et al., 2020).

Female gender has been associated with higher levels of burnout (Scotney et al., 2019; Wang et al., 2020); females have been found to have greater incidence of conflicts and work and home, contributing to higher rates of burnout (Hanbali et al., 2015). Despite higher rates of burnout in females, Wang et al. (2020) notes unmarried individuals have higher levels of burnout, noting the support structure of a family is an important contributor to the psychological wellbeing of healthcare professionals. Additionally, individuals of the white or Caucasian race have also been noted to experience burnout at higher rates, compared to those of African American, Asian, or other races (Swamy et al., 2020).

Financial stress has been indicated as a factor in the development of burnout and anxiety; individuals who experience greater levels of financial stress often take less time away from work to compensate for their financial situation (Porter et al., 2018). Educational level can also have implications for financial stress and burnout (Wang et al., 2020). Individuals with lower

educational levels are at a higher risk of reduced personal accomplishment, and therefore have higher predictors of burnout; this is likely because professionals with higher educational levels have not only received proper training, but also have become better adapted to demands and developed effective coping strategies for workplace stressors (Trufelli et al., 2015; Nowakowska-Domagala et al., 2015).

Self-compassion (Neff, 2003) is defined as the ability to grant oneself understanding and kindness in times of distress or hardness. Individuals who can exercise self-compassion in difficult or distressing circumstances have been noted to have lower levels of burnout and anxiety, while those with greater self-criticism have higher levels of burnout and anxiety (Ondrejkova & Halamova, 2022).

To address common workplace factors of burnout I have added control variables of perceived organizational support (Eisenberger, 1986), hospital type, geographical work setting, hours worked per week, shifts worked per week, general work times, and exposure to patient euthanasia. Additionally, to address the mentioned personal factors of burnout, I have added the following control variables to this study: age, gender, race, annual household income, highest educational level, and self-compassion (Neff, 2003).

To date, most literature of compassion fatigue focuses on general healthcare populations and veterinarians; very few studies have been performed specifically regarding veterinary nurses. Several studies (Epp & Waldner, 2012; Bakker et a., 2005; Hamric & Blackhall, 2007; Lederer et al., 2008) have indicated general healthcare nurses are at a higher risk of developing compassion fatigue. Zeidner (2013) indicated approximately 50% of general healthcare professionals suffer from compassion fatigue. A more recent study (Gribben et al., 2019) has identified a predisposition to the "emotional depletion" of compassion fatigue among general

healthcare workers (p. 740). More significantly, research of general healthcare nurses shows this demographic is at a higher risk for substance and alcohol abuse as an unfortunate consequence of stress in the workplace (Maher-Brisen, 2007; Budd, 2012; Foli et al., 2020; Jarrad et al., 2018).

The body of literature related to compassion fatigue among veterinarians is quickly growing. McArthur et al. (2017) concluded that up to 30% of veterinary students were at risk of severe compassion fatigue, while Tomasi et al., (2019) concluded 67% of tenured veterinarians were suffering severe compassion fatigue. A longitudinal study assessing compassion fatigue among veterinarians indicated levels that steadily increased over a three-year period (Ouedraogo et al., 2020). A study of veterinarians indicated job demands such as high patient ratios were linked to inadequate staffing and lack of resources, leading to medication errors and poor patient outcomes (Todaro-Francheschi, 2013). Increased job demands and occupational stressors have been directly linked to increased suicide rates of veterinarians that are three times higher than the general population (Bartram & Baldwin, 2010), with a more recent survey indicating 3% of reported veterinarian deaths between 1979 and 2015 were caused by suicide (Tomasi et al., 2019).

Though literature specifically focusing on veterinary nurses is limited, a few studies have been performed that have identified this demographic as being susceptible to elevated levels of compassion fatigue (Hayes et al., 2020), at rates higher than their veterinarian counterparts (O'Brien et al., 2021). Occupational stressors including exposure to terminally ill or dying patients, high workload demands, and low compensation with long working hours have been identified as contributors to high levels of compassion fatigue among veterinary nurses (Black et al., 2011; Harvey & Cameron, 2020), with up to 82% of veterinary nurses sampled in a recent survey reporting high impacts of compassion fatigue as a direct effect of their work (Harvey &

Cameron, 2020). Scotney et al., (2019) has performed one of the few studies dedicated to veterinary nurses, indicating this population experienced moderate levels of compassion fatigue. Interestingly, Hill et al. (2020) has indicated veterinary nurses are more impacted by the secondary traumatic stress component of compassion fatigue than veterinarians.

Many people enter the veterinary field because of their empathetic nature and desire to care for animals (Scotney et al., 2015). Yet, highly empathetic people are found to be at a significantly higher risk of suffering from compassion fatigue (Black et al., 2011; Lovell, 2013; Hewson, 2014; Faulkner, 2016). The emotional bonds formed with animal patients and human clients places a burden upon veterinary nurses to maintain forged bonds and manage relationships, including interchanges with emotionally or verbally abusive human clients (Bartram & Baldwin, 2010; Lovell, 2013; Lloyd & Campion, 2017). Such bonds require veterinary nurses to maintain mental, emotional, and spiritual balance, to reduce their risk of compassion fatigue (Lovell, 2013). Compassion fatigue remains an emotional burden in response to the continual, and often excessive, exposure of traumatic events such as euthanasia of pets and the emotions experienced by patients and their families (Nimmo & Huggard, 2013; Lovell, 2013; Scotney et al., 2015; Scotney et al., 2019). Although veterinary nurses care deeply for their animal patients and human clients, most are ill-equipped to handle intense emotional responses of others to the illness or loss of a beloved pet (Hanrahan et al., 2018), and ultimately struggle with disenfranchised grief (Marton et al., 2020).

Compassion fatigue is important to understand in the caring professions. There is a growing body of literature about compassion fatigue as it affects general healthcare nurses and veterinarians. However, there is a gap in the literature about compassion fatigue as it impacts veterinary nurses; the literature that is available regarding compassion fatigue as it affects

veterinary nurses explains the prevalence with no further implications or actions. This study aims to address the gap in the literature regarding compassion fatigue as it affects veterinary nurses to propose reasonable interventions to improve working conditions and drive organizational interventions.

Compassion Satisfaction

Compassion satisfaction is the fulfilling alternative to compassion fatigue, in which caregivers derive satisfaction from their caring work and it acts as a personal resource to mitigate the relationship between job demands and job strain (Stamm, 2002; Amjad & Rafique, 2013; Martin-Cuellar et al., 2021). Stamm (2002) has identified compassion satisfaction as a factor that counteracts the risks of burnout and secondary traumatic stress, suggesting it may reveal the undeniable resiliency of the human spirit. Compassion satisfaction has been found as a moderating factor in the relationship between job demands and job commitment (Stamm, 2002; Amjad & Rafique, 2013); when compassion satisfaction is high, job strain was found to be reduced significantly, and job commitment was found to be enhanced (Stamm, 2005; Tremblay & Messervey, 2011; Amjad & Rafique, 2013).

Compassion satisfaction can remain present in conjunction with compassion fatigue (Amjad & Rafique, 2013; Hegney et al., 2013), bringing feelings of fulfillment, reward, achievement, happiness, enrichment, inspiration, energy, gratitude, and hope (Walker & Avant, 2011; Jarrad & Hammad, 2020), demonstrating intersectionality between compassion satisfaction, happiness, and wellbeing (Jarrad & Hammad, 2020).

Despite compassion satisfaction's role as positive aspects of care giving (Stamm, 2010), research remains limited across all venues of caregiving. Most of the research available focuses

on general healthcare nurses and physicians, with few studies available for veterinarians or veterinary nurses. Compassion satisfaction among general healthcare nurses is reported to be at a low or moderate range, with 37% of nurses in a recent study indicating levels at the lower end of reporting (Salimi et al., 2020). Several others (Galiana et al., 2017; Neville & Cole, 2013; Arribas-Garcia et al., 2020) also concluded that most general healthcare nurses were experiencing low to moderate levels of compassion satisfaction. Notably, individuals with high levels of compassion satisfaction experience lower levels of personal distress (Hunt et al., 2019).

Compassion satisfaction is not well researched within veterinary literature. However, a few articles have surfaced recently introducing compassion satisfaction as it impacts veterinarians. Veterinarians have been reported to have low to moderate levels of compassion satisfaction (Scotney et al., 2019), however, this could be due to the overall lack of time spent directly with animal patients. Hill et al. (2019) has produced similar results, in which veterinarians had lower compassion satisfaction than other groups of veterinary professionals. A more recent study has indicated declining levels of compassion satisfaction among veterinarians over a three-year period (Ouedraogo et al., 2021).

Literature relating to compassion satisfaction as it impacts veterinary nurses remains extremely limited, with most studies (Black et al., 2011; Deacon & Brough 2017; Liss et al., 2019) focusing on job satisfaction instead of compassion satisfaction. Two studies of veterinary nurses that have empirically demonstrated have indicated low to moderate levels of compassion satisfaction (Scotney et al., 2019; Hill et al., 2020). Notably, the veterinary nurses within those survey populations exhibited compassion satisfaction at higher levels than their veterinarian counterparts (Scotney et al., 2019; Hill et al., 2020). Scotney et al. (2019) explains that though

levels of compassion satisfaction are suboptimal, the act of intense caring for the needs of animal patients allows veterinary nurses to develop higher levels of compassion satisfaction.

There are several workplace factors that can impact an individual's level of compassion satisfaction. Working longer hours, in addition to a higher number of shifts, have been show to negatively impact compassion satisfaction (Ruiz-Fernandez et al., 2020). Hill et al., (2020) has indicated higher levels of compassion satisfaction among individuals working less than 40 hours per week. Individuals working morning shifts have been found to have higher levels of compassion satisfaction (Ruiz-Fernandez et al., 2020). Additionally, individuals working in a semi-urban or rural setting have higher levels of compassion satisfaction than those working in urban settings (Ruiz-Fernandez et al., 2020).

Overall workload has been found as a major facet in compassion satisfaction; individuals who are able to exercise autonomy and decision latitude, in combination with workload control, statistically have higher levels of compassion satisfaction (Galiana et al., 2022). Exposure to repeated patient euthanasia also has a negative effect on compassion satisfaction among veterinary professionals (Hill et al., 2020).

Evidence of personal factors that impact compassion satisfaction is conflicting. For example, Ruiz-Fernandez et al. (2020) found significant differences in compassion satisfaction based on an individual's age; however, Sacco et al. (2015) did not find variance among younger and older age groups. An individual's gender also presents inconclusive evidence, as some studies have found significant differences of compassion satisfaction between men and women (Ruiz-Fernandez et al., 2020; Roney et al., 2018), while others found no significant differences (Hunsaker et al., 2015; Mooney et al., 2017). Notably, Finzidottan & Kormosh (2017) have found direct correlations between compassion satisfaction and an individual's marital quality.

Given the inconclusiveness of these results, Galiana et al., (2022) indicated an individual's ability to develop compassion satisfaction is likely due to their intrinsic self-compassion. Additionally, Hill et al., (2020) have concluded that the greatest personal indicator of compassion satisfaction is an individual's agreement that working with animals is a dream come true.

Previously mentioned control variables of hospital type, geographical workplace setting, perceived organizational support (Eisenberger, 1986), hours worked per week, shifts worked per week, general work times, and exposure to patient euthanasia will also address potential workplace factors of compassion satisfaction in the current study. In addition to the control variables addressing personal factors, marital status will be added as a control variable to account for any additional variance in compassion satisfaction that could result from an individual's marital status.

In the caring professions, understanding the full effects of compassion satisfaction is crucial. There is a growing body of literature explaining compassion satisfaction as it affects general healthcare nurses and veterinarians. However, literature about compassion satisfaction as it impacts veterinary nurses is inadequate. As such, this study aims to address the gap in the literature regarding compassion satisfaction as it relates to veterinary nurses to deepen the understanding of this condition.

Anxiety and Depression

Anxiety and depression are two of the most common mental illnesses; they are recognized to have a high comorbidity and belong to a much larger category of disorders relating to internalization. Given their relationship, studies have demonstrated anxiety disorders normally

precede the presence of depressive disorders (Kalin, 2020), and the presence of either disorder

predicts greater outcomes of the other (Fava et al., 2004; Kalin, 2020).

Healthcare professionals are frequently supporting and caring for patients that are

traumatized, acutely or terminally ill. The intense emotional investment required to perform such

acts can become overwhelming and reduces an individual's ability to manage the demands

necessary for tasks (Hegney et al., 2013). The sustained emotional toll of employment as a

caretaker is an inherent risk factor for the development or worsening of symptoms related to

anxiety or depression, leading to intrusive images, avoidance behaviors, poor self-esteem, and

the potential for suicidal ideations (Hooper et al., 2010).

Anxiety

Anxiety as a mental illness is defined by excessive worry and apprehension about

expectations about events, activities, work, or performance, occurring most days for at least six

months (American Psychiatric Association, 2022). This condition is associated with at least three

or more the following symptoms, including restlessness or feeling on edge, fatigue, difficulty

concentrating or lack of thoughts, general irritability, muscle tension, and sleep disturbances

(American Psychiatric Association, 2022).

The Diagnostic and Statistical Manual of Mental Health Disorders, Fifth Edition- Text

Revision (DSM-5 TR) indicates anxiety is a common and often disabling mental illness that can

be characterized by avoidance of events that could have negative effects or outcomes,

procrastination in behavior and/or decision making due to overwhelming worries, in addition to

the need to seek constant reassurance (American Psychiatric Association, 2022). The DSM-5 TR

(2022) details anxiety as an exclusionary diagnosis, noting it cannot be diagnosed if the

symptoms are better explained by other panic or phobia-based disorders and cannot be a direct result of stressors or traumatic experiences.

Workplace setting is arguably the most consistent contributor to anxiety, in addition to overall hours and times worked (Hegney et al., 2013). Individuals working in emergency or intensive care environments have been identified as having a higher risk of developing anxiety (Hegney et al., 2013; Trumello et al., 2019), potentially due to increased time pressure and overall emotional needs to carry out tasks (Kim et al, 2019). The level of responsibility an individual has within the workplace has also correlated with higher levels of anxiety; potentially because of overall responsibility and accountability for the lives of patients (Ilhan & Kupeli, 2022; Besirli et al., 2021). Lack of workplace support systems, autonomy, and decision latitude have also been correlated with higher levels of anxiety among general healthcare nurses (Ilhan & Kupeli, 2022).

Literature relating to personal factors of anxiety are conflicting. For example, Hegney et al. (2013) has found significant variance in anxiety based on an individual's age, while several others (Besirli et al., 2021; Maharaj et al., 2019) indicated age is associated with anxiety levels. Similarly, results for gender (Hegney et al., 2013; Maharaj et al., 2019), educational level, and income (Kim et al., 2021; Hegney et al., 2013) have not shown a definitive relationship with anxiety. A distinct relationship between anxiety and exposure to COVID-19 has been identified in the literature, in which the threat of increased exposure also impacts anxiety levels (Trumello et al., 2019; Ilhan & Kupeli, 2022). Additionally, an individual's ability to remain self-compassionate has been shown as a protective factor of anxiety, and has been demonstrated as a mediator in the relationship between COVID-19 exposure and anxiety symptomology (Kavakli et al., 2020).

In addition to previously mentioned control variables, the Fear of COVID-19 Scale

(Ahorsu et al., 2019) has been added to address anxiety related to the global pandemic.

Depression

A depressive episode is defined by persistent feelings of sadness, hopelessness, and loss

of interest in previously enjoyed activities for a period of two weeks or longer. The DSM-5 TR

(2022) outlines symptoms of depressed or lowered mood for most of the day, diminished interest

in activities, significant fluctuations in body weight, abnormal appetite changes, slowed thought

processes and decline in physical movement that is observed by others, fatigue or loss of energy

nearly every day, feelings of worthlessness or excessive and/or inappropriate guilt, diminished

ability to concentrate or make decisions, and recurrent thoughts of death, recurrent suicidal

ideation without a specific plan or suicide attempt, or a specific plan for committing suicide

(American Psychiatric Association, 2022). To diagnose a depressive episode, an individual must

experience symptoms associated with clinically significant distress, or impairment in social,

occupational, and/or other areas of functioning. Additionally, these symptoms must not be a

direct result of another medical condition or substance abuse (American Psychiatric Association,

2022).

Job-satisfaction appears as a consistent factor of depression across the literature,

indicating lowered job-satisfaction increases risk of overall psychological distress and leads to

depression (Ilhan & Kupeli, 2022; Maharaj et al., 2019). Associations have been found between

highly stressful work environments such as emergency settings and levels of depression

(Maharaj et al., 2019). General workload expectations and exposure to patient death are also

evidenced by increased depression levels (Marton et al., 2020). Exposure to patient death has

contributed to levels of depression among caretakers, with individuals experiencing higher levels

of depression also having higher incidences of substance abuse (Pohl et al., 2022). Overall effort to perform work has been shown as a predictor of depression and has been shown to increase with the onset of the COVID-19 pandemic (Magnavita et al., 2021). Alternatively, justice and support within the workplace have demonstrated protective capabilities against depression (Magnavita et al., 2021).

To address potential variance in depression that could be attributed to substance abuse, the Tobacco, Alcohol, Prescription Drug, and Substance Abuse Scale (McNeely et al., 2017) has been added to the study as a control variable.

Personal factors related to depression remain undefined in literature. A few studies have empirically demonstrated significant relationships between personal factors of age, gender, education, and profession (Ustun, 2021; Hegney et al., 2013), while others have not found a definitive relationship (Ilhan & Kupeli, 2022). Financial standing or stress, however, has been evidenced with higher levels of depression across multiple populations (Ustun, 2021; Ilham & Kupeli, 2022; Guan et al., 2022).

Self-compassion and an individual's ability to remain resilient in times of psychological distress have continuously demonstrated a distinctly negative relationship with depression and general suicidality (Neff et al., 2022; Germer & Neff, 2014; Neff, 2003). As such, self-compassion has been added as a control variable in the current study. To address potential variance in depression that could be attributed to substance abuse, the Tobacco, Alcohol, Prescription Drug, and Substance Abuse Scale (McNeely et al., 2017) has been added to the study as a control variable.

Anxiety and Depression in the Veterinary Profession

The level of stress experienced by healthcare professionals can often become detrimental to mental health, and daily life. Many professionals experience stressors stemming from work-related events in combination with ethical dilemmas, patient demands, anxiety and tensions leading to a lower quality of care, thus lowering compassion satisfaction, quality of life, ongoing interactions with patients and families that may foster a range of emotions, and lack of support from peers and leadership (Koinis, et al., 2015). In a recent survey of general healthcare nurses, 41% indicated they were suffering from anxiety, while 32% indicated they were suffering from depression (Maharaj et al., 2019)

Research related to psychological occupational health as it impacts veterinary professionals is limited. Compassion fatigue remains the most prevalent byproduct of veterinary careers, and is often caused by excessive workloads, long hours, frequent on-call duties, workplace conflicts, limited resources, unrealistic pet owner expectations, exposure to euthanasia, critically ill patients, and high patient ratios (Kogan et al. 2020; Epp & Waldner, 2012). Occupational stress exacerbates the onset of mental health disorders such as anxiety and depression resulting in suicide if not treated (Bartram & Baldwin, 2010). A study among female veterinarians revealed 37% of the surveyed population was currently suffering from minor psychological distress including anxiety and depression, indicating the stressful nature of veterinary medicine (Shirangi, et al., 2013). In a more recent survey of veterinarians, one-third of respondents exhibited levels of anxiety and depression above the clinical diagnostic cutoff (Karraffa et al., 2019). Unsurprisingly, mental illness, in combination with little workplace support for this dynamic contributes to the increasing suicide rates within the veterinary profession (Platt et al. 2012). A 2019 survey of over 11,000 veterinarians indicated this

population is over five times more likely to experience serious psychological distress, have a history of depressive episodes, and experience suicidal ideations (Witte et al., 2019). Potential explanations for a suicide risk among this demographic lies within the access to lethal drugs, social and professional isolation, subconscious expectations, and financial pressures (Kimber & Gardner, 2016; Thompson-Hughes, 2019).

Several studies involving suicide rates of veterinarians have shown this demographic is subjected to high levels of occupational stress, client and patient relations, time management, long working hours, and has easy access to lethal medications (Bartram & Baldwin, 2010; Platt et al., 2012). Witte et al. (2019) stands as the most recent review of undetermined deaths of veterinary professionals between 2003 and 2014; however, this study focuses more on veterinarian deaths and does not fully represent veterinary nurses. Comparatively, research has shown that veterinarians are likely to experience serious psychological distress, have a history of depression, and experienced suicidal ideation. Due to their proximity to controlled and dangerous medications, veterinarians have a higher likelihood of dying by suicide compared to the general population (Nett et al., 2015).

Suicide rates among the general population indicate approximately 27% of individuals who die by suicide have had contact with a licensed mental health professional in the months immediately prior to their passing (Jack et al., 2018). One study (Witte et al., 2019) investigating mental health among veterinary professionals was available for review, in which results indicate approximately 38% of the veterinary nurses sampled had a history of suicide attempt prior to their fatal incident, 26% previously experienced a mental health crisis before dying by suicide, and 60% were undergoing mental health treatment at the time of death. Additionally, 46% of these individuals were undergoing substance abuse treatment at less than two months prior to

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their death, with 22% experiencing a contributing workplace factor (Witte et al., 2019). Of the limited data extracted from Witte et al. (2019), veterinarians are more likely to engage in self-poisoning with barbiturates such as pentobarbital, while veterinary nurses were more likely to utilize firearms or opiates. It has since been proposed that veterinarians are more likely to die by suicide on their first attempt, given their increased access and knowledge of lethal means (Nett et al., 2015). Given the usage of opiates by veterinary professionals, this lends to the issue of drug diversion and substance abuse among this demographic (Witte et al., 2019).

Studies representative of anxiety and depression levels among veterinary nurses are extremely limited. Though several studies (Mair et al., 2020; Quain et al., 2022 Scotney et al., 2019) make claims of heightened anxiety and depression among veterinary nurses, only one study has provided empirical evidence to support these claims (O'Brien et al., 2021). Veterinary nurses experience heightened stressors, in comparison with veterinarians, and are more vulnerable to negative mental health outcomes including suicide due to decreased workplace autonomy and lower socioeconomic status (Witte et al., 2019; Fowler, 2016). O'Brien et al. (2021) is the only study to date providing empirical evidence regarding anxiety and depression levels among veterinary nurses; with significant differences in anxiety and depression found in veterinary nurse respondents compared to groups of veterinarians and managers. Additionally, 62% of veterinary nurse respondents indicated they have previously engaged in non-suicidal self-injury, with 10% of respondents stating they have made a suicide attempt (O'Brien et al., 2021).

Understanding the full impacts of anxiety and depression among those in caring professions is important; there is a growing body of literature about anxiety as it affects general healthcare nurses and veterinarians. However, there is a gap in the literature about anxiety and depression as they impact veterinary nurses. As such, this study aims to address the gap in the

literature regarding anxiety and depression as it relates to veterinary nurses and deepen the understanding of its prevalence and effects.

Relationship of Compassion Fatigue with Anxiety and Depression

Healthcare professionals are frequently supporting and caring for ill, traumatized, or dying patients. The emotional investment required to perform such acts can often become overwhelming and reduces abilities to manage the demands of compassion and empathy necessary for such tasks (Hegney et al., 2013). As a recognized occupational hazard, compassion fatigue creates a predisposition to the development of mental health disorders, specifically anxiety and depression (Hegney, et al., 2013; Hooper et al., 2010). The combination of compassion fatigue and mental illness acts as a dangerous cycle for the worsening of symptoms causing many to fall victim to increased intrusive images, avoidance behaviors, poor self-esteem, and suicidal ideations (Hooper et al., 2010).

Organizationally, mental illnesses such as anxiety and depression and compassion fatigue have been found to reduce individual and team productivity, increase staff turnover and absenteeism, ultimately leading to patient safety concerns and dissatisfaction (Hegney et al., 2013; Hooper et al., 2010). Hegney et al. (2013) discerned a positive correlation between levels of compassion fatigue and anxiety, as well as a positive correlation between compassion fatigue and depression among a population of general healthcare nurses. Additionally, we can conclude that if higher levels of anxiety and depression are seen among general nursing populations, this demographic is also at an elevated risk of compassion fatigue (Hegney et al., 2013).

Relationship Between Burnout and Anxiety

The exact relationship between burnout and anxiety remains unclear across the literature. However, consistent themes of strong positive correlation between burnout and anxiety indicate individuals suffering from burnout are also suffering from anxiety (Ding et al., 2014). Emotional exhaustion, as the cornerstone of burnout, is the greatest contributor to anxiety (Koutsimani et al., 2019). Interactions between work situations and an individual's personality can create a state of anxiety and contribute to burnout onset (Koutsimani et al., 2019). Anxiety often acts as a protective factor against threatening situations; yet prolonged anxiety can affect an individual's ability to function and often leads to burnout within the workplace given the exhaustion from remaining in a heightened state and from elevated responses to stressors (Cole, 2014). Maske et al. (2016) has indicated 59% of individuals diagnosed with burnout have also been diagnosed with an anxiety disorder, further solidifying the relationship. Though there appears to be a strong correlation between burnout and anxiety, Koutsimani et al. (2019) has concluded that each is a distinct concept. Further, Davies et al., (2022) has indicated burnout as a significant predictor of anxiety.

Additionally, a distinct relationship between anxiety and burnout has been discussed in the literature with the start of the COVID-19 pandemic, indicating there is a positive correlation among healthcare workers (Trumello et al., 2020). I have added the Fear of COVID-19 Scale (Ahorsu et al., 2019) as a control variable in this study to capture elevated anxiety levels that could be secondary to the COVID-19 pandemic.

Given the relationship defined between burnout and anxiety, I have postulated the following hypothesis:

Hypothesis 1a: Burnout accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables.

Relationship Between Secondary Traumatic Stress and Anxiety

There is some evidence of the relationship between secondary traumatic stress and anxiety. Hegney et al. (2013) has indicated a positive, statistically significant relationship between secondary traumatic stress and anxiety, in which respondents experiencing both conditions at a high level were considered very distressed. Despite several others indicating similar results (Trumello et al., 2020; Ludick & Figley, 2017; Quinn et al., 2019), no relationship of causation has been established. The high emotional demands associated with negative feelings resulting from continual contact with secondary trauma can often exceed an individual's self-management capabilities, threaten their vulnerability, and expose them to an anxious state. Such exposures may prompt protective mechanisms against trauma and anxiety in their work environment to create emotional separation between themselves and their patients to maintain control and suppress emotions and avoid empathetic commitment (Arimon-Pages et al., 2019). Burnout has been well-established as a factor leading to anxiety (West et al., 2006; Bhutani, 2012) and mental illness (Aronsson et al., 2017; Henson et al., 2020), but the additional impact of secondary-traumatic stress needs investigation. Given the relationship defined between secondary traumatic stress and anxiety, I have proposed the following hypothesis:

Hypothesis 1b: Secondary traumatic stress accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables and burnout.

Relationship Between Burnout and Depression

Literature shows conflicting evidence about the relationship between burnout and depression. Individuals suffering from burnout can often appear depressed, as there is some overlap in etiology including anhedonia, lowered mood, fatigue, loss of energy, impaired concentration, feelings of worthlessness, changes in appetite, sleep problems, and suicidal ideations (American Psychiatric Association, 2022). Yet, despite the resemblance to depression, burnout is not identified as a mental illness and is not mentioned in the DSM-5 TR.

Consistent evidence of a medium to high correlation between burnout and depression suggests an overlap in the concepts, prompting some researchers to suggest that burnout might not be a distinct phenomenon but rather a dimension of depression (Bianchi et al., 2015). Contrary to this assertion, Koutismani et al. (2019) found that burnout and depression are two distinct phenomena; burnout being impacted by work specific circumstances, whereas depression is context free and remains pervasive. It is plausible, however, that depression could start as work-related stress, or burnout could eventually become depression (Koutismani et al., 2019).

Given the defined relationship between burnout and depression, I have proposed the following hypothesis:

Hypothesis 2a: Burnout accounts for a statistically significant amount of variance in Depression after accounting for all control variables.

Relationship Between Secondary Traumatic Stress and Depression

Literature discussing the relationship between secondary traumatic stress and depression is limited, with no empirical evidence of causation. Hegney et al. (2013) has performed one of the few studies relating to these conditions indicating a positive, statistically significant

relationship between secondary traumatic stress and depression. Additionally, individuals experiencing high levels of both secondary traumatic stress and depression are considered very distressed (Hegney et al., 2013), suggesting these individuals should be monitored closely for maladjustment (Trumello et al., 2019). Ilhan & Kupeli (2021) have produced similar results, also concluding the COVID-19 pandemic has also contributed to increased levels of secondary traumatic stress and depression among healthcare providers. Arimon-Pages et al. (2019) attributes these reactions to high emotional demands that are often associated with negative feelings resulting from continual contact with secondary trauma. These demands often exceed an individual's self-management capabilities, threatening their vulnerability, and exposing them to a depressed state. Such exposures may prompt protective mechanisms against trauma in the work environment and creates emotional separation between to maintain control, suppress emotions, and avoid empathetic commitment (Arimon-Pages et al., 2019). Burnout has been well-established as a factor leading to mental illness (Aronsson et al., 2017; Henson et al., 2020), but the additional impact of secondary-traumatic stress needs investigation.

Given the correlation between secondary traumatic stress and depression, I have proposed the following hypothesis for this study:

Hypothesis 2b: Secondary Traumatic Stress accounts for a statistically significant amount of variance in Depression after accounting for all control variables and burnout.

Relationship of Compassion Satisfaction with Anxiety and Depression

Hegney et al. (2013) is one of the few studies to provide empirical evidence of compassion satisfaction with anxiety and depression, concluding compassion satisfaction is largely independent of anxiety and depression. Compassion satisfaction had only a weak

relationship with depression, and no significant relationship with anxiety (Hegney et al., 2013). Several others (Jo et al., 2020; Osseiran-Moisson et al., 2016) have produced conflicting results, indicating higher levels of compassion satisfaction can be a protective factor against anxiety and depression. Compassion satisfaction has been associated with higher levels of psychological resiliency processes such as self-efficacy, positive emotions, mindfulness (Craigie et al., 2016), self-compassion (Neff, 2003), and generally have greater intrinsic ability to protect them from occupational stressors (Craigie et al., 2016).

Given compassion satisfaction's ability to act as a protective factor against anxiety and depression, I have postulated the following hypotheses for this study:

Hypothesis 3a: Compassion Satisfaction moderates the relationship between Burnout and Anxiety among a population of veterinary nurses, with the strength of the relationship between Burnout and Anxiety reducing as Compassion Satisfaction increases.

Hypothesis 3b: Compassion Satisfaction moderates the relationship between Secondary Traumatic Stress and Anxiety among a population of veterinary nurses, with the strength of the relationship between Secondary Traumatic Stress and Anxiety reducing as Compassion Satisfaction increases.

Hypothesis 4a: Compassion Satisfaction moderates the relationship between Burnout and Depression among a population of veterinary nurses, with the strength of the relationship of Burnout and Depression reducing as Compassion Satisfaction increases.

Hypothesis 4b: Compassion Satisfaction moderates the relationship between Secondary Traumatic Stress and Depression among a population of veterinary nurses, with the strength of

the relationship between Secondary Traumatic Stress and Depression reducing as Compassion Satisfaction increases.

Summary

This literature review began with historical and modern conceptualizations of compassion fatigue, and detailed relationships of compassion fatigue and compassion satisfaction as they impact anxiety, and depression among general caregivers, veterinarians, and veterinary nurses. The information detailed in this chapter suggests that veterinary nurses remain underrepresented in the literature yet are deeply impacted by compassion fatigue and its relationships with anxiety and depression. Contributing workplace and personal factors of compassion fatigue, compassion satisfaction, anxiety, and depression were also discussed and provided additional insight on considerations of factors that have significant relationships in the synthesis of these conditions. Hypotheses related to the relationships between compassion fatigue, compassion satisfaction, anxiety and depression were presented.

CHAPTER 3: METHODOLOGY

This chapter will introduce the research methodology for this quantitative study examining the relationship between compassion fatigue, anxiety, and depression among veterinary nurses, and the role of compassion satisfaction in moderating this relationship.

Research Design

This study utilized a non-experimental, cross-sectional survey research design. In non-experimental research design, the researcher does not randomly assign study participants to manipulation or control groups, but instead approaches the circumstances as they exist, ultimately impacting the direction in which inferences can be made. In this type of research design, researchers often make inferences by seeking to identify independent variables by beginning with a dependent variable (Pedhazur & Scmelkin, 1991). Non-experimental research has often been compared to correlational research design. This assertion is not appropriate, as correlational research often refers to analytical rather than design characteristics (Cook & Campbell, 1979), and study design is not simply about an operation utilized to analyze data (Pedhazur & Scmelkin, 1991).

Differentiation between design and analytical levels are critical in making distinctions between explanatory and predictive non-experimental research. Predictive non-experimental design seeks to forecast values of one or more dependent variables using one or more independent or control variables whereas explanatory design seeks to explain phenomena. Contrasts between these two design methods have implications for data collection, analysis, and interpretation. Explanatory studies are driven by theory and utilized to reveal independent and dependent variables, while predictive studies are driven by practical purposes. The focus of this research was to better explain anxiety and depression by examining independent variables of compassion fatigue, compassion satisfaction, and additional control variables of personal,

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professional and workplace demographics, self-compassion (Neff, 2003), substance usage, fear

of COVID-19 (Ahorsu et al., 2019), and perceived organizational support (Eisenberger, 1986).

As such, a non-experimental explanatory design was utilized.

Independent Variables

The independent variables are burnout and secondary traumatic stress, which together

comprise compassion fatigue (Stamm, 2010). Compassion fatigue is defined as "the cumulative

effects of burnout and secondary traumatic stress, ultimately causing exhaustion, frustration,

anger and depression, and a negative feeling driven by fear and work-related trauma" (Stamm,

2010, p. 12).

Burnout

Stamm (2010) defines burnout as

> "One element of the negative effects of caring known as compassion
>
> fatigue...burnout is associated with feelings of hopelessness and difficulties in
>
> dealing with work or doing your job effectively. These...usually have a gradual
>
> onset...They can reflect the feeling that your efforts make no difference, or they
>
> can be associated with a very high workload or non-supportive environment" (p.
>
> 13).

Secondary Traumatic Stress

Stamm (2010) defines secondary traumatic stress (STS) as

> "An element of compassion fatigue...about work-related secondary trauma
>
> exposure to people who have experienced extremely or traumatically stressful
>
> events...negative effects may include fear, sleep disturbances, intrusive images, or
>
> avoiding reminders of the person's traumatic experience" (p.13).

Dependent Variables

The dependent variables for this study include two distinct constructs of anxiety and depression.

Anxiety

Anxiety is a distinct mental illness characterized by excessive worry, increased feelings of tension, recurring intrusive thoughts or concerns. Physical symptoms of anxiety include hyperhidrosis, tachycardia, dizziness, difficulty concentrating, muscle tension, restlessness, fatigue, and sleep disturbances (DSM-5 TR 2022). Notably, disturbances of anxiety cannot be attributable to the psychological effects of a substance or another medical condition.

Depression

Depression is a distinct mental illness characterized by depressed mood and/or loss of interest of pleasure over a two-week period, and includes symptoms such as significant weight loss or gain (+/- 5%) when not dieting or a fluctuation in appetite, reduced physical movement that is observable by others, fatigue or loss of energy, feelings of worthlessness or excessive feelings of guilt, decreased ability to think or concentrate with included indecisiveness, and recurrent thoughts of death with recurrent suicidal ideation with or without a specific plan, or a suicide attempt (DSM-5 TR, 2022).

Moderating Variable

Compassion Satisfaction

The moderating variable of the study is compassion satisfaction as conceptualized by Stamm (2010), defining compassion satisfaction as the following:

"The pleasure you derive from being able to do your work well...you may feel like it's a pleasure to help others through your work. You may feel positively about your colleagues

or your ability to contribute to the work setting or even the greater good of society" (p. 12).

Research Questions

Research Question 1 (RQ1): What is the effect of compassion fatigue on anxiety among a population of veterinary nurses after controlling for personal, workplace, and employment factors?

Research Question 2 (RQ2): What is the effect of compassion fatigue on depression among a population of veterinary nurses after controlling for personal, workplace, and employment factors?

Research Question 3 (RQ3): How does Compassion Satisfaction (CS) moderate the relationship between Compassion Fatigue and Anxiety among a population of veterinary nurses?

Research Question 4 (RQ4): How does Compassion Satisfaction (CS) moderate the relationship between Compassion Fatigue and Depression among a population of veterinary nurses?

Hypotheses

Hypothesis 1a: Burnout accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables.

Hypothesis 1b: Secondary Traumatic Stress accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables and burnout.

Hypothesis 2a: Burnout accounts for a statistically significant amount of variance in Depression after accounting for all control variables.

Hypothesis 2b: Secondary Traumatic Stress accounts for a statistically significant amount of variance in Depression after accounting for all control variables and burnout.

Hypothesis 3a: Compassion Satisfaction moderates the relationship between Burnout and Anxiety among a population of veterinary nurses, with the strength of the relationship between Burnout and Anxiety reducing as Compassion Satisfaction increases.

Hypothesis 3b: Compassion Satisfaction moderates the relationship between Secondary Traumatic Stress and Anxiety among a population of veterinary nurses, with the strength of the relationship between Secondary Traumatic Stress and Anxiety reducing as Compassion Satisfaction increases.

Hypothesis 4a: Compassion Satisfaction moderates the relationship between Burnout and Depression among a population of veterinary nurses, with the strength of the relationship of Burnout and Depression reducing as Compassion Satisfaction increases.

Hypothesis 4b: Compassion Satisfaction moderates the relationship between Secondary Traumatic Stress and Depression among a population of veterinary nurses, with the strength of the relationship between STS and Depression reducing as Compassion Satisfaction increases.

Conceptual Framework

Figures 3 and 4 describe the conceptual model utilized for this study. As previously described, the study seeks to understand the relationship of compassion fatigue with anxiety, and depression, as well as the potential moderating effect of compassion satisfaction.

Figure 3

Conceptual Model indicating relationship of Burnout and Secondary Traumatic Stress with anxiety, as moderated by compassion satisfaction (CS)
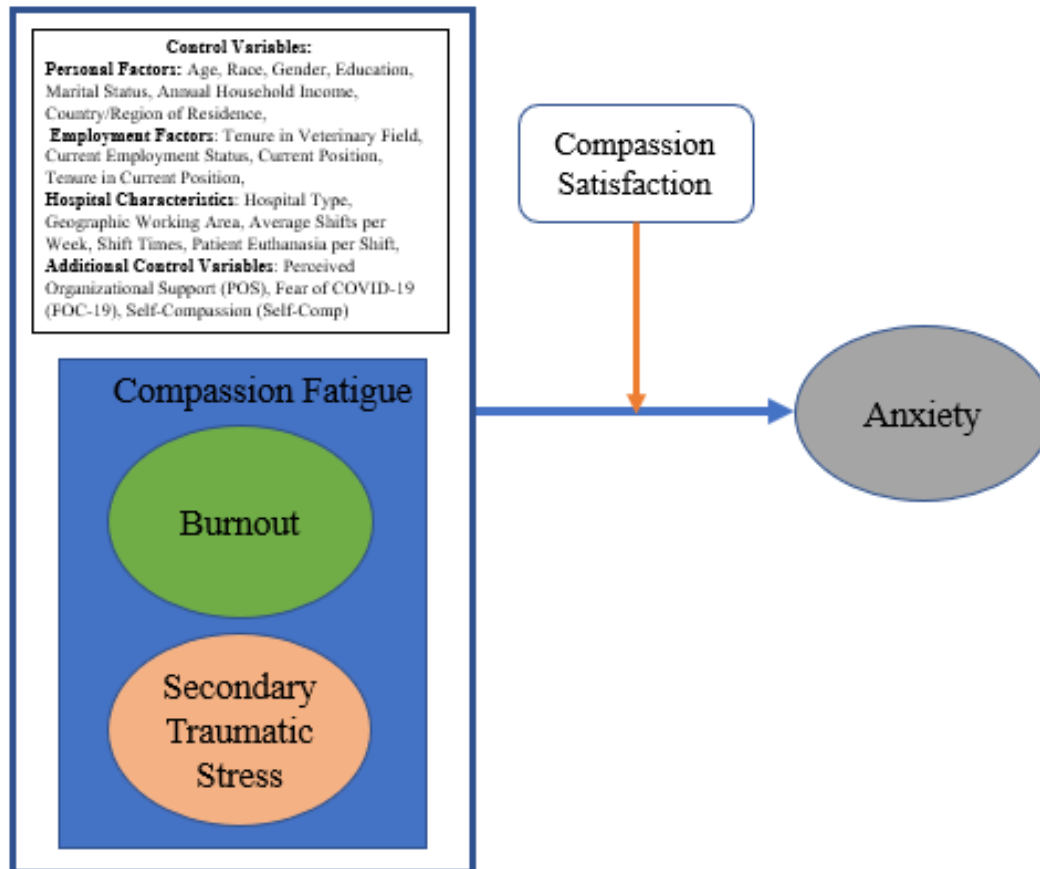
Figure 4

Conceptual Model indicating relationship of Burnout and Secondary Traumatic Stress with anxiety, as moderated by compassion satisfaction (CS)
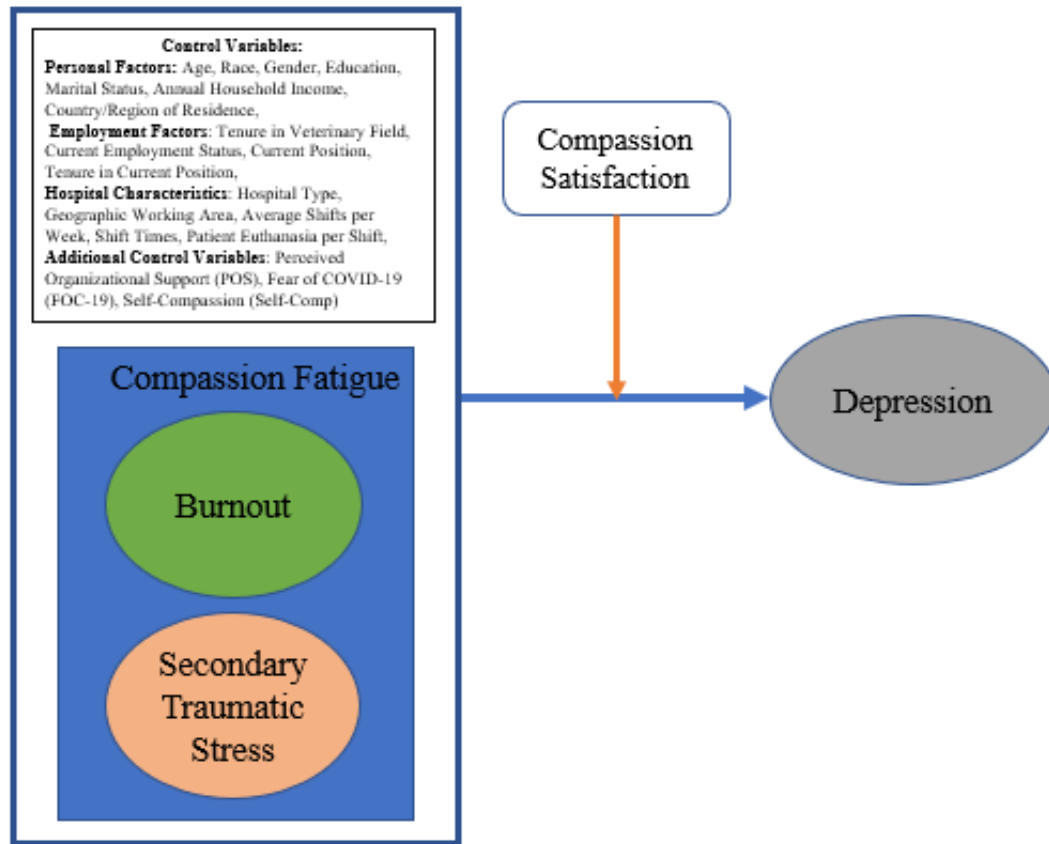
Measurement

Population and Sampling

The population for this study consisted of veterinary nurses across North America. Data collection was conducted using a variety of recruitment efforts targeted towards veterinary nurses. Respondents were veterinary nurses who were motivated by their own interest in the veterinary field, and a desire to assist with the research effort. A total of 455 survey responses were received. Upon examining the responses, 284 responses were considered eligible based on demographic data necessary for eligibility to include completion of survey and country of

residence. This response rate was considered sufficient for attaining at least 0.80 predictive

power using multiple regression according to the rule outlined by Tabachnick and Fidell (2019)

and Green (1991). This is outlined by the formula below, which states the study required at least

226 responses:

$$50 + 8 \, K = 250; \text{ where K is the number of predictors.}$$

$$K = 25$$

The value of K (above) is the summation of all variables in this study, including control

variables of gender, age, race, marital status, income, region/country of residence, tenure in

veterinary field, current position, tenure in current position, hospital type, geographic area of

work, shifts worked per week, shift times, and euthanasia exposure, perceived organizational

support, Fear of COVID-19, Tobacco, alcohol, prescription drug and substance abuse (TAPS),

self-compassion, independent variables of secondary traumatic stress and burnout, moderating

variable compassion satisfaction and dependent variables of anxiety and depression.

Data Collection

The survey was distributed digitally in the form of an online link using several sources to

reach the population of veterinary nurses:

1. A large regional veterinary conference for veterinary nurses spanning a total of 4

   days.

2. A large statewide veterinary nurse association with access to 1,000 members.

3. Three leading influencers in North America in the veterinary nursing/veterinary

   wellbeing profession.

Instrumentation

As indicated in conceptual model (Figures 3 and 4), the study contains one independent variable (CF), two dependent variables (ANX and DEP), and one potentially moderating variable (CS).

The study utilized subscales from Stamm's (2010) Professional Quality of Life Scale (ProQOL) to measure compassion fatigue and compassion satisfaction with 30 items, the Generalized Anxiety Disorder Scale (GAD-7) to measure anxiety with seven items (Spitzer & Kroenke, 2006), and the Patient Health Questionnaire (PHQ-9) scale to measure depression with nine items (Spitzer & Kroenke, 2001). In addition, 22 items were added to address occupational details, and demographic information including age, gender preferences, previous psychological history, perceived work-life balance, and personal perception of current mental state, personal life stress, and stress related to the novel coronavirus pandemic. The self-report survey that was used for this study consisted of 95 items. Appendix A details the full survey instrument for respondents.

Professional Quality of Life Scale

Burnout

Burnout, a component of compassion fatigue, was measured using ten questions from the Professional Quality of Life scale (ProQOL-5) (Stamm, 2002). The ProQOL utilizes a five-point Likert scale, where 1 = Never, and 5 = Very Often for respondents to consider questions about themselves and their current work situation and select the number that reflects how often they have experienced these feelings over the past thirty days. Reliability analysis for the BO subscale has been reported between 0.72 (Stamm, 2010) for general caretaking professionals, and 0.86 for veterinary professionals (Perrett, 2020a). For the current study, the BO subscale exhibits strong

reliability, with a Cronbach's alpha of 0.731. Table 1 details survey questions measuring burnout.

Table 1

Survey Questions Measuring Burnout

Survey Question
1.* I am happy
4.* I feel connected to others
8. I am not as productive at work because I am losing sleep over the traumatic experience of a patient I help
10. I feel trapped by my job as a veterinary worker
15.* I have beliefs that sustain me
17.* I am the person I've always wanted to be
19. I feel worn out because of my work as a veterinary worker.
21. I feel overwhelmed because my caseload seems endless
26. I feel "bogged down" by the system
29.* I am a very caring person

Question number denotes sequence in ProQOL instrument
*Reverse scored

Secondary Traumatic Stress

Secondary Traumatic Stress, a component of Compassion Fatigue, was measured using ten questions from version five of the Professional Quality of Life scale (ProQOL), originally designed by Stamm (2002). The ProQOL utilizes a five-point Likert scale, where 1 = Never, 3 = Sometimes, and 5 = Very Often for respondents to consider questions about themselves and their current work situation and select the number that reflects how often they have experienced these feelings over the past thirty days. Reliability analysis for the STS subscale has been reported at 0.80 (Stamm, 2010) for general caretaking professionals, and 0.84 for veterinary professionals (Perrett, 2020a). For the current study, the STS subscale exhibits strong internal reliability, with a Cronbach's alpha of 0.820. Table 2 lists questions used to measure Secondary Traumatic Stress.

Table 2

Survey Questions Measuring Secondary Traumatic Stress

Survey Question
2. I am preoccupied with more than one patient I help
5. I jump or am startled by unexpected sounds
7. I find it difficult to separate my personal life from my life as a veterinary worker
9. I think I might have been affected by the traumatic stress of those I help
11. Because of my job as a veterinary worker, I have felt "on edge" about various things.
13. I feel depressed because of the traumatic experiences of the patients I help
14. I feel as though I am experiencing the trauma of a patient I have helped
23. I avoid certain activities or situations because they remind me of frightening experiences of the patients I help.
25. As a result of my job as a veterinary worker, I have intrusive, frightening thoughts
28. I can't recall important parts of my work with trauma victims

Question number denotes sequence in ProQOL instrument

Compassion Satisfaction

Compassion Satisfaction (CS) was measured using ten questions from version five of the

Professional Quality of Life scale (ProQOL), originally designed by Beth Stamm (2002). The

ProQOL utilizes a five-point Likert scale, where 1 = Never, 3 = Sometimes, and 5 = Very Often

for respondents to consider questions about themselves and their current work situation and

select the number that reflects how often they have experienced these feelings over the past thirty

days. Reliability analysis for the CS subscale has been reported at 0.87 (Stamm, 2010) for

general caretaking professionals, and 0.91 for veterinary professionals (Perrett, 2020a). In the

current study, the CS subscale demonstrated strong internal reliability, with a Cronbach's alpha

level of 0.883. Table 3 lists the items used to measure compassion satisfaction in the current

study.

Table 3

Survey Questions Measuring Compassion Satisfaction

Survey Question
3. I get satisfaction from being able to help patients
6. I feel invigorated after working with those I help
12. I like my work as a veterinary worker
16. I am pleased with how I can keep up with nursing techniques and protocols
18. My work makes me feel satisfied
20. I feel happy thoughts and feelings about patients I help and how I could help them
22. I believe I can make a difference through my work
24. I am proud of what I can do to help
27. I have thoughts that I am a "success" as a veterinary worker
30. I am happy that I chose to do this work

Question number denotes sequence in ProQOL instrument

Generalized Anxiety Disorder Scale (GAD-7)

Anxiety

The seven item Generalized Anxiety Disorder Scale (GAD-7) was utilized to measure anxiety levels of the sample (Spitzer & Kroenke, 2006). The GAD-7 utilizes a four-point Likert scale, asking respondents to characterize their symptoms associated with a statement over the past two weeks, where 0 = Not at all, and 3 = Nearly Every Day. Total scores of five, ten, and fifteen correspond to anxiety levels of mild, moderate, and severe, respectively (Spitzer & Kroenke, 2006). In previous studies, the psychometric properties for the GAD-7 indicate Cronbach's alpha is reported between 0.86 and 0.95 (Spitzer & Kroenke, 2006; Karaffa, 2019); the current study produced a strong Cronbach's alpha level of 0.906. Table 4 lists questions measuring anxiety in the current study.

The GAD-7 also contains an additional question, that asks respondents to classify how difficult the symptoms or "problems" make it for them to complete normal daily tasks, with responses ranging from not difficult at all, to extremely difficult. This question was analyzed

separately to determine the overall severity of anxiety among respondents and will be explained further in a later section.

Table 4

Survey Questions Measuring ANX

Survey Question
1. Feeling nervous, anxious, or on edge
2. Not being able to stop or control worrying
3. Worrying too much about different things
4. Trouble relaxing
5. Being so restless that it's hard to sit still
6. Becoming easily annoyed or irritable
7. Feeling afraid as if something awful might happen

Patient Health Questionnaire (PHQ-9)

Depression

The nine item Patient Health Questionnaire (PHQ-9) was utilized to measure the depression levels of the sample (Spitzer & Kroenke, 2001). The PHQ-9 utilizes a four-point Likert scale, asking respondents to characterize their symptoms associated with a statement over the past two weeks, where 0 = Not at all, and 3 = Nearly every day. Table 5 details questions used to measure depression. In previous studies, psychometric properties for the PHQ-9 indicate Cronbach's alpha between 0.83 and 0.95 (Spitzer & Kroenke, 2001; Beard, et al., 2016). Remaining consistent with previous studies, the PHQ-9 exhibited strong internal reliability in the current study with a Cronbach's alpha of 0.906. Table 5 lists questions measuring anxiety in the current study.

The PHQ-9 also contains an additional question, that asks respondents to classify how difficult the symptoms or "problems" make it for them to complete normal daily tasks, with responses ranging from not difficult at all, to extremely difficult. This question was analyzed

separately to determine the overall severity of depression among respondents and will be

explained further in a later section.

Table 5

Survey Questions Measuring DEP

Survey Question
1. Little interest or pleasure in doing things
2. Feeling down, depressed, or hopeless
3. Trouble falling or staying asleep, or sleeping too much
4. Feeling tired or having little energy
5. Poor appetite or overeating
6. Feeling bad about yourself - or that you are a failure or have let yourself or family down
7. Trouble concentrating on things, such as reading the newspaper or watching television
8. Moving or speaking so slowly that other people could have noticed? Or the opposite - being so fidgety or restless that you have been moving around a lot more than usual
9. Thoughts that you would be better off dead or hurting yourself in some way

Table 6, below, details a summary of variables used for analysis in this study.

Table 6

Summary of Variables Used for Analyses

Variable Name	Variable Type	Level of Measure	Jamovi Description	Survey Question
Compassion Fatigue				
Burnout	Independent	Scale	BO	1*,4*,8, 10, 15*,17, 19, 21, 26, 29*
Secondary Traumatic Stress	Independent	Scale	STS	2, 5, 7, 9, 11, 13, 14, 23, 25, 28
Compassion Satisfaction	Moderator	Scale	CS	3,6,12,16,18,20,22,24,27,30
Anxiety	Dependent	Scale	ANX	31-38
Depression	Dependent	Scale	DEP	39-48

* Reverse Scored

Control Variables

This research study also requested respondents classify themselves within several personal, employment, and workplace characteristics. These variables were chosen due to their potential role in other studies of veterinary nurses, and to determine if the sample of the current research was representative of the overall population (Scotney et al., 2019; Hayes et al., 2021; Quain et al., 2021; Robinson et al., 2019; Witte et al., 2020; Greenhill, 2014; Liss et al., 2020).

Personal Characteristics

Questions addressing personal characteristics of respondents included factors of gender, age, race, marital status, highest educational level, annual household income, and country of residence.

Employment Characteristics

Questions addressing employment characteristics of respondents included factors employment characteristics of the respondents such as tenure in the veterinary field, current employment status, current position, and tenure in current position.

Hospital Characteristics

Respondents were also asked to classify several items related to their working environment, including type of hospital they are currently employed, geographic area of work, shifts worked per week, shift times, and average number of euthanasia procedures performed each shift.

Previous Mental Health History

The study also included two questions regarding previous mental health or trauma training, and past mental health support obtained by licensed professionals.

Other Control Variables

Several other variables addressing factors of influence upon respondent's overall scores were added to determine other areas of potential controls.

Tobacco, Alcohol, Prescription Drug, and Substance Use

The Tobacco, Alcohol, Prescription Drug, and Substance Use (TAPS) tool was originally developed as a two-step assessment tool from instruments not previously validated. TAPS-1, as utilized in this research, contains four questions asking respondents about the frequency of use in the past twelve months of tobacco, alcohol above daily recommended limits (>5 drinks/day for men, >4 drinks/day for women, illicit drugs, and non-medical use of prescription medications such as sedatives, opioids, and stimulants. Veterinary medications including Gabapentin and Fentanyl were added as potential venues of substances due to their availability within veterinary practices and their potential for abuse. Respondents were asked to choose from five options, ranging from "never" to "daily or almost daily". For the TAPS-1 instrument, any response other than "never" is considered a positive screen, with a potential range of 0-3 for tobacco and other drugs, and 0-4 for alcohol (McNeeley et al., 2016; Gryczyski et al., 2017). Since TAPS is a composite measure, internal reliability is not necessary to address. Table 7 lists questions used to measure tobacco, alcohol, prescription drug, and substance abuse.

Table 7

Survey Questions Measuring TAPS

Survey Question
1. In the past 12 months, how often have you used tobacco or any other nicotine delivery product (e-cigarette, vaping, or chewing tobacco)?
2. In the past 12 months, how often have you had 5 or more drinks (men)/4 or more drinks (women) containing alcohol in one day?
3. In the past 12 months, how often have you used any prescription medications just for the feeling, more than prescribed, or that were not prescribed to you (including veterinary medications)?
4. In the past 12 months, how often have you used any drugs including marijuana, cocaine, crack, heroin, methamphetamine (crystal meth), hallucinogens, ecstacy/MDMA), Fentanyl, or Gabapentin?

Perceived Organizational Support

The 8-item version of Eisenberger's (1986) Perceived Organizational Support Scale (POSS) was utilized in this research to detect the impact of POS on overall compassion fatigue, anxiety, and depression levels of respondents. The original POS scale contained 36-items, however the one-dimensionality of the original scale and its high internal validity, usage of the shortened 8-item scale is not problematic (Rhoades & Eisenberger, 2002). Psychometric properties of the 8-item POS scale from previous studies indicate Cronbach's alpha between 0.91 to 0.94 (Rhodes & Eisenberger, 2002; Kim, et al., 2016; Chen, et al., 2021); the scale's internal reliability remains consistent in the current study, with a Cronbach's alpha of 0.937. The POSS scale requests respondents to rate their agreement with statements that represent possible opinions they may have about working at their current employer. Responses range from 0 = strongly disagree, to 6= strongly agree. Table 8 lists questions used to measure Perceived Organizational Support.

Table 8

Survey Questions Measuring POS

Survey Question
1. The organization values my contribution to its well-being
3.* The organization fails to appreciate any extra effort from me
7. *The organization would ignore any complaint from me
9. The organization really cares about my well-being
17.* Even if I did the best job possible, the organization would fail to notice
21. The organization cares about my general satisfaction at work
23.* The organization shows very little concern for me
27. The organization takes pride in my accomplishments at work

Question number correlates to item-number on original 36-item scale
*Reverse scored

Fear of COVID-19

The emergence of the Coronavirus pandemic of 2019 has led to the development of fears, increased anxiety, and worries among individuals worldwide. Veterinary professionals are no exception to this and faced major workflow modifications in addition to increased patient caseloads due to a surge in pet adoptions, coupled with communication challenges and financial stressors of clients (Quain, et al., 2021; Routh, et al., 2021). The Fear of COVID-19 (FOC-19) was developed by Ahorsu, et al. (2020) to complement clinical efforts in preventing the spread and treatment of COVID-19 cases. Psychometric properties of the FOC-19 scale indicate Cronbach's alpha ranging from 0.82 to 0.92 (Ahorsu, et al., 2020; Perz, et al., 2021). Internal reliability of the FOC-19 scale in the current study remained consistent with previous studies, with a Cronbach's alpha of 0.904. The FOC-19 scale contains seven questions, in which participants indicate their level of agreement with statements using a five-point Likert scale, where 1=strongly disagree, and 5 = strongly agree. Each question has a minimum score of one, and a maximum score of five. A total score is then calculated by adding up each item score, ranging from 7 to 35. The higher the score, the greater the fear of COVID-19. Table 9 lists questions used to measure FOC-19 in this study.

Table 9

Survey Questions Measuring FOC-19

Survey Question
I am most afraid of COVID
It makes me uncomfortable to think about COVID
My hands become clammy when I think about COVID
I am afraid of losing my life because of COVID
When I watch the news and stories about COVID on social media, I become anxious
I cannot sleep because I'm worried about getting COVID
My heart races or palpitates when I think about getting COVID

Self-Compassion

The concept of self-compassion is a relatively new concept among the fields of social, personality, and clinical psychology, yet has gained significant momentum in recent years (Leary, et al., 2007; Neff, 2008). Kristen Neff (2003a, 2003b) originally defined self-compassion as the ability to handle one's feelings of suffering with a sense of warmth, connection, and concern. Neff further differentiates self-compassion into three categories, including self-kindness, common humanity, and mindfulness. Self-compassion has been shown to be associated with greater psychological well-being and suggests this concept is an important protective factor in fostering emotional resilience, and greater levels of psychological health, often demonstrated by lower levels of depression and anxiety (Leary, et al., 2007; Neff, 2003a; Neff, et al., 2007; Raes, 2011).

The original self-compassion scale (SCS) contains 26-items, measuring six components of self-compassion, with negative aspects reverse scored. Components addressed in this scale include self-kindness, self-judgment, common humanity, isolation, mindfulness, and over-identification. The current study utilized a shortened, 12-item version of the SCS scale, which requests respondents to indicate how often they behave in the stated manner, using a five-point Likert scale, where 1 = almost never and 5 = almost always.

Subscale scores are calculated by adding item scores, and a total score for self-compassion is computed by reversing negative subscale items and adding all subscale scores (Raes, et al., 2011). The short form of the self-compassion scale offers similar psychometric properties and construct validity, with Cronbach's alpha greater than or equal to 0.86 in similar populations (Raes, et al., 2011; McArthur, et al., 2017). Additionally, Neff (2022) notes that due to the subscales only containing two questions each in the 12-item short-form used in this survey,

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each subscale has lesser values of construct validity (α = 0.54 to 0.76) and thus should not be

analyzed independently. Internal reliability of the self-compassion short form was high, with a

Cronbach's alpha of 0.826. Table 10 details questions used to measure self-compassion in the

current study.

Table 10

Survey Questions Measuring Self-Compassion

Survey Question	Subscale
1. When I fail at something important to me, I become consumed by feelings of inadequacy	OI
2.* I try to be understanding and patient towards those aspects of my personality I don't like	SK
3.When something painful happens I try to take a balanced view of the situation	MI
4.* When I'm feeling down, I tend to feel like most other people are probably happier than I am	ISO
5. I try to see my failings as part of the human condition	CH
6.* When I'm going through a very hard time, I give myself the caring and tenderness I need	SK
7. When something upsets me, I try to keep my emotions in balance	MI
8.* When I fail at something important to me, I tend to feel alone in my failure	ISO
9.* When I'm feeling down, I tend to obsess and fixate on everything that is wrong	OI
10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people	CH
11.* I'm disapproving and judgmental about my own flaws and inadequacies	SJ
12.* I'm tolerant and impatient towards those aspects of my personality I don't like	SJ

OI= Over-Identification; SK = Self-Kindness; MI = Mindfulness Items; ISO = Isolation Items

CH = Common Humanity; SJ = Self-Judgment

Institutional Review Board Approval

This study was approved by the Hood College Institutional Review Board (IRB). The

research purpose, research design, and instrumentation were reviewed. Permission to proceed

with the study was obtained in December 2021. Full materials related to the IRB process and

participant informed consent are included in Appendix B.

Pilot Test

Following IRB approval, the survey was pilot tested by three veterinary nurses and two

survey content experts. The instrument was sent via online link and respondents were asked to

provide feedback on the time taken to complete the survey, clarity of questions, and the overall

flow of the survey. Based on the feedback of the pilot participants, the wording of two questions

was slightly modified for clarity; no major revisions were required.

Data Analysis

Prior to testing the relationships between independent and dependent variables and to

determine eligibility of the data several assumptions autocorrelation (Rajaretnam, 2016),

multicollinearity (Hair et al., 2017; Ringle et al., 2015), homoscedasticity, and linearity (Osborne

& Walters, 2002) were tested to assure normality. After all assumptions were met, hierarchical

multiple regression analysis was conducted to examine hypotheses H1a, H1b, H2a, H2b.

Moderation analysis was performed to test for H3a, H3b, H4a, and H4b. Demographic and

employment control variables were added to the hierarchical model to control these effects and

enhance the internal validity of the study (Marauyma & Ryan, 2014).

Reliability and Validity

This study primarily utilized existing survey instruments that demonstrate strong

reliability. Additionally, the pilot test was used to ensure questions were unambiguous and easy

for participants within this population to comprehend. After data was collected, the primary step

of data analysis focused on the measurement of Cronbach's alpha to ascertain that there was a

moderate or higher level of internal consistency for each variable measured within this

population.

The Professional Quality of Life Scale (ProQOL), which measures burnout, secondary

traumatic stress, and compassion satisfaction, has been validated among populations of general

healthcare nurses (Ruiz-Fernandez et al., 2020; Craigie et al., 2016), licensed clinical social

workers (Caringi et al., 2017), police officers (Davies et al., 2022), animal care workers (Hill &

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LaLonde, 2019), and veterinarians (Ouedraogo et al., 2021; Perret et al., 2020b), Additionally, the ProQOL has been validated among veterinary nurses (Scotney et al., 2019). The Generalized Anxiety Disorder Scale (GAD-7) has been validated among several populations of general healthcare nurses (Debski et al., 2021; Serrano et al., 2021; Wozniak et al., 2021), police officers (Davies et al., 2022), and veterinarians (Chigerwe et al., 2021; Karaffa et al., 2019). Lastly, the Patient Health Questionnaire (PHQ-9) has been validated among several populations of general healthcare nurses (Debski et al., 2021; Serrano et al., 2021, Wozniak et al., 2021), police officers (Davies et al., 2022), and veterinarians (Chigerwe et al., 2021; Karaffa et al., 2019).

Limitations

Remaining aligned with other research studies, this study is not without limitations. The constructs of this study, while they are well tested and have evidence of strong psychometric properties, are measured using self-reported instruments. The number of constructs and variables involved in this study made it crucial to manage the length of the survey instrument to mitigate the impact of participant fatigue on results. Additionally, many of the items in this survey were based on participants' individual perceptions, making the potential of social desirability bias a larger threat to the findings. In terms of internal validity, temporal sequence is not addressed in the designed study and stands as a reasonable threat to internal validity due to the cross-sectional design of the survey. The correlations identified between burnout and secondary traumatic stress with anxiety and depression do not indicate complete causality, as there are many other factors to consider. Regression analysis contained controls to address spuriousness, however it is impossible to address each single control variable that could have an impact on the levels of compassion fatigue, anxiety, and depression among a population of veterinary nurses. Lastly, the

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non-representative sample means indicates caution should be taken when generalizing the findings of this study to other populations.

Summary

This chapter detailed the research methodology for this quantitative study. The research design, sampling plan, instrumentation, as well as data collection, validity, and reliability were also discussed to improve the power of statistical analysis. Limitations of the study were also presented to provide transparency of the research design. Chapter 4 will present the results of the survey and data analysis. Chapter 5 will present a discussion on findings, observations on process, and implications for further study.

CHAPTER 4: QUANTITATIVE ANALYSIS

This study was performed to examine the prevalence of Compassion Fatigue (CF), Anxiety (ANX), and Depression (DEP) among a population of veterinary nurses and to better understand the relationship of CF with ANX and DEP. In addition, this study also aimed to uncover the impact of Compassion Satisfaction (CS) on the relationships between Compassion Fatigue, Anxiety, and Depression. The chapter opens with a summary of the study methodology, followed by respondent characteristics, presentation of how data was prepared for analysis, and finally a description of all variables utilized within this study. Next, responses to research questions and hypotheses are provided in sequence. Chapter 4 concludes with a summary of the results findings. Results are presented for each of the research questions in this study:

Research Question 1 (RQ1): After controlling for personal, workplace, and employment factors, what is the relationship between compassion fatigue and anxiety among a population of veterinary nurses?

Hypothesis 1a: Burnout accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables.

Hypothesis 1b: Secondary Traumatic Stress accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables and burnout.

Research Question 2 (RQ2): After controlling for personal, workplace, and employment factors, what is the relationship between compassion fatigue and depression among a population of veterinary nurses?

Hypothesis 2a: Burnout accounts for a statistically significant amount of variance in Depression after accounting for all control variables.

Hypothesis 2b: Secondary Traumatic Stress accounts for a statistically significant amount of variance in Depression after accounting for all control variables and burnout.

Research Question 3 (RQ3): How does Compassion Satisfaction (CS) influence the relationship between Compassion Fatigue and Anxiety among a population of veterinary nurses?

Hypothesis 3a: Compassion Satisfaction moderates the relationship between Burnout and Anxiety among a population of veterinary nurses, with the strength of the relationship between Burnout and Anxiety reducing as Compassion Satisfaction increases.

Hypothesis 3b: Compassion Satisfaction moderates the relationship between Secondary Traumatic Stress and Anxiety among a population of veterinary nurses, with the strength of the relationship between Secondary Traumatic Stress and Anxiety reducing as Compassion Satisfaction increases.

Research Question 4 (RQ4): How does Compassion Satisfaction (CS) influence the relationship between Compassion Fatigue and Depression among a population of veterinary nurses?

Hypothesis 4a: Compassion Satisfaction moderates the relationship between Burnout and Depression among a population of veterinary nurses, with the strength of the relationship of Burnout and Depression reducing as Compassion Satisfaction increases.

Hypothesis 4b: Compassion Satisfaction moderates the relationship between Secondary Traumatic Stress and Depression among a population of veterinary nurses, with the strength of the relationship between Secondary Traumatic Stress and Depression reducing as Compassion Satisfaction increases.

Summary of Methods

This research study is representative of a non-experimental, cross-sectional survey design. The survey instrument was created using pre-existing instruments with strong psychometric properties that permitted self-responses to describe the impact of the selected variables on their daily working and living mindset. As previously discussed, the purpose of this research was to evaluate relationships between compassion fatigue, comprised of burnout and secondary traumatic stress, and mental illness constructs of anxiety and depression in a population of veterinary nurses. The study also sought to identify the role of compassion satisfaction in the relationship of compassion fatigue with anxiety and depression. The convenience sampling allowed uninhibited access to participants without violating confidentiality.

As discussed in Chapter 3, I utilized the 30-item Professional Quality of Life Scale (Stamm, 2010), the 7-item Generalized Anxiety Disorder Scale (Spitzer et al., 2006), and the 9-item Patient Health Questionnaire (Kroenke et al., 2002) to identify the prevalence of compassion fatigue, anxiety, and depression among the population, and the role of compassion satisfaction in moderating these relationships. The survey also contained questions to address personal, employment, and workplace factors, in addition to well-validated scales to control for perceived organizational support (Eisenberger, 1986), Fear of COVID-19 (Ahorsu et al., 2019), tobacco, alcohol, prescription drug, and substance usage (Gryczynski et al., 2017); and self-compassion (Neff, 2003).

The survey was approved by Hood College's Institutional Review Board and was pilot tested by three veterinary nurses and two content experts to evaluate the clarity and overall flow of the instrument. Feedback from the pilot study was used to make minor adjustments prior to large-scale administration of the survey.

Data obtained from participants was downloaded from SurveyMonkey to Jamovi version 2.2.5, where results were evaluated, and data was cleaned of non-responses and lack of eligibility. Out of the total 455 responses, a total of 284 were deemed acceptable for full analysis.

After data was deemed appropriate for analyses, an average score of each variable was created for each respondent. The variable composite scores were added to hierarchical regression as a composite for each variable after controlling for personal, employment, and workplace factors, in addition to perceived organizational support, Fear of COVID-19, TAPS, and Self-Compassion. Moderation analyses were performed to determine the role of compassion satisfaction in the relationship between compassion fatigue with anxiety and depression. Table 11 outlines the summary of variables used for hierarchical regression analysis, with corresponding survey question number.

Table 11

Summary of Variables Used for Analyses

Variable Name	Variable Type	Level of Measure	Jamovi Description	Survey Question
Compassion Fatigue				
Burnout	Independent	Scale	BO	1*,4*,8, 10, 15*,17, 19, 21, 26, 29*
Secondary Traumatic Stress	Independent	Scale	STS	2, 5, 7, 9, 11, 13, 14, 23, 25, 28
Compassion Satisfaction	Moderator	Scale	CS	3,6,12,16,18,20,22,24,27,30
Anxiety	Dependent	Scale	ANX	31-38
Depression	Dependent	Scale	DEP	39-48

* Reverse Scored

Population and Sample

As previously stated, the population for this study consisted of veterinary nurses across North America. Recruitment efforts for data collection were targeted towards veterinary nurses; respondents were veterinary nurses motivated by their own interests in the veterinary field and desire to participate with research efforts. Thus, it is to be noted that this was not a random sample. A total of 455 survey responses were obtained; after full examination, 284 responses were deemed eligible based on demographic data, including country of residence and completion of the full survey.

Data Collection

The survey was distributed using several sources to reach the population of veterinary nurses:

1. A large regional veterinary conference for veterinary nurses spanning a total of 4 days.
2. A large statewide veterinary nurse association with access to 1,000 members.
3. Three leading influencers in North America in the veterinary nursing/veterinary wellbeing profession.

Though I identified the regional veterinary conference and the statewide nurse association as potential data sources, I did not receive sufficient support from them to garner responses to the survey through those sources. The third source, however, yielded excellent results. Each of the three social media influencers posted details about my research study on their social media platforms. Additionally, one influencer distributed the survey link to an email list of veterinary nurses and shared details of my study on their newsletter with colleagues in various organizations. The survey was available between December 2021 and February 2022. Table 12 outlines responses obtained from each source.

Table 12

Full Survey Response Source and Totals

Source	Total
Social Media	399
Professional Organization	18
Other	38
Total (N = 455)	455

Data cleaning

All data was loaded into Jamovi version 2.2.5 for review and cleaning. The survey

received a total of 455 responses, with 284 of them being completed. I used the 284 completed

responses for analysis, which met the requirement for a statistical power of 0.8. Table 13 details

completed responses from each platform.

Table 13

Completed Survey Response Source and Totals

Source	Total
Social Media	247
Professional Organization	31
Other	6
Total (N = 284)	284

Participant Characteristics

Demographic variables

Demographic characteristics of 284 respondents who completed the entire survey are

presented in this section. A total of 455 individuals responded, however those who had partial

responses were omitted. Of the 284 full responses, 96% of respondents classified themselves as

veterinary nurses, with the remaining 4% classifying as other positions within the veterinary field

and are part of a veterinary team.

Personal Characteristics

Table 14 details personal characteristics of respondents by gender, age, race, marital status, education, household income, and country of residence. The distribution of the sample for gender, age, race, marital status, educational level, and household income is representative of the population. Other studies for a veterinary population also reflect these demographics for gender and age (Scotney et al., 2019; Hayes et al., 2021; Quain et al., 2021), race (Robinson et al., 2019; Witte et al., 2020; Greenhill, 2014), marital status (Greenhill, 2014), household income and educational level (Liss, et al., 2020).

Table 14

Respondent Personal Characteristics

Gender:		
Response	Percentage (%)	Total
Female-identified	95.10%	272
Male-identified	3.50%	10
Non-Binary	0.70%	2
Prefer not to say	0.40%	1
Prefer to self-describe	0.40%	1
Age Range		
Response	Percentage (%)	Total
18 to 25 years old	15.80%	45
26 to 30 years old	27.80%	79
31 to 35 years old	23.60%	68
36 to 40 years old	13.00%	38
41 to 45 years old	9.50%	27
46 to 50 years old	4.60%	13
51 to 55 years old	3.20%	9
55+ years old	2.50%	7
Race		
Response	Percentage (%)	Total
White or Caucasian	90.10%	256
Hispanic, Latino, or Spanish	3.20%	9
Black or African American	1.10%	3
American Indian or Alaska Native	1.40%	4

Asian	1.80%	5
Multiracial or Biracial	2.10%	8
Other (please specify)	0.40%	1

Marital Status

Response	Percentage (%)	Total
Single	34.50%	98
Married	40.80%	116
Cohabitating with partner	19.40%	55
Widowed	0.40%	1
Divorced	4.60%	13
Separated	0.40%	1

Highest Educational Level

Response	Percentage (%)	Total
Some high school, no diploma	0.40%	1
High school diploma, or equivalent	4.90%	14
Some college credit, no degree	13.00%	37
Trade/technical/vocational training	15.80%	45
Associate degree	33.10%	94
Bachelor's degree	26.40%	75
Master's degree	3.20%	9
Professional degree	2.50%	7
Doctorate degree	0.70%	2

Annual Household Income

Response	Percentage (%)	Total
Under $20,000	4.20%	12
$20,001-35,000	21.10%	60
35,001-50,000	24.30%	69
$50,001-$65,000	14.10%	40
$65,001- $80,000	9.90%	28
$80,001-90,000	5.60%	16
$90,001-100,000	5.60%	16
Greater than 100,000	15.10%	43

US Region/Country of Residence

Response	Percentage (%)	Total
Northeast	25.40%	72
Mid-Atlantic	6.00%	17
Southeast	15.50%	44
Midwest	11.60%	33
West	7.30%	21
Pacific Northwest	6.70%	19

Employment Characteristics

Table 15 details characteristics of respondent's employment characteristics. Questions regarding employment status, tenure in the veterinary field, tenure in current position, and type of current position were also included in this survey.

Tenure in Veterinary Field

Approximately 40% of respondents reported three to eight years in the veterinary field, while 33% report over 12 years of tenure in the field. Only 8% of respondents have been in the field for less than three years. Additionally, 17% report nine to twelve years of tenure. The decrease in frequency of tenure between nine to twelve years shows an interesting aspect of potential employee attrition rates or burnout cycles. Scotney et al., (2019) reports similar demographics relating to tenure in the field, in which many respondents had been in the field for one to five years. Liss, et al. (2020), and Kogan, et al. (2020), report similar results among a population of veterinary nurses.

Current Employment Status

Most respondents (87%) reported working on a full-time basis, while 8% reported working part-time. Only 1.7% work as a relief or as needed worker, with no respondents working on a volunteer basis. Individuals who reported as "other" employment gave details of maternity leave, seasonal work, a veterinary nurse for the United States Army currently stationed in Japan, and a veterinary nurse who is works part-time and has their own pet-based business.

Current Position

Due to the platforms the survey was released, I was able to gather information for veterinary nurses and other members of a veterinary team. Though this study is intended for veterinary nurses, others were included to determine if there was a difference between groups or

position type. As such, 26.9% of respondents reported as uncredentialed nurses, 55.6% reported as credentialed veterinary nurses, while 5.6% identified as credentialed with a specialty certification. Approximately 8% of respondents identified themselves as "other" with self-identification comments of credentialed nurse in management positions, credentialed technicians in corporate operational roles, hospital managers, corporate area managers, and client service managers; because these individuals self-identified as veterinary nurses at different capacities, they were included in the analyses of veterinary nurses.

Tenure in Current Position

Information regarding respondent's tenure in their current position was also gathered. The greatest percentage of respondents (29%) reported being in their current position for two to three years, with 17.5% reporting as being in their current position for six months to one year. Interestingly, only 14.9% reported working in their current position for over ten years. When considering the tenure within the field itself, this contrasts slightly, perhaps indicating attrition rates among highly tenured individuals. In alignment with overall field tenure, the smallest percentage of individuals reported being in their current position for nine to ten years. These results are consistent with demographics of other recent surveys of veterinary nurses (Kogan, et al., 2020)

Table 15

Respondent Employment Characteristics

Tenure in Veterinary Field

Response	Percentage (%)	Total
Less than 1 year	2.10%	6
1 to 2 years	6.60%	19
3 to 4 years	14.70%	42
5 to 6 years	13.60%	39
7 to 8 years	12.20%	35
9 to 10 years	8.00%	23
11 to 12 years	8.70%	25
More than 12 years	33.90%	97

Current Employment Status

Response	Percentage (%)	Total
Full-time	87.10%	249
Part time	8.00%	23
Relief/As needed (PRN)	1.70%	5
Other (please specify)	3.10%	9

Current Position

Response	Percentage (%)	Total
Kennel assistant	0.30%	1
Technician assistant	2.80%	8
Technician (unlicensed)	26.90%	77
Credentialed technician	55.60%	159
Credentialed technician with VTS	5.60%	16
Client Care Representative	0.70%	2
Other	8.00%	23

Tenure in Current Position

Response	Percentage (%)	Total
Less than 6 months	7.30%	21
6 months to 1 year	17.50%	50
2 years to 3 years	29.00%	83
4 years to 5 years	16.10%	76
6 years to 8 years	11.90%	34
9 years to 10 years	4.20%	12
Greater than 10 years	14.93%	40

Workplace Characteristics

Hospital Type

The highest percentage of respondents reported as being employed by a General Practice veterinary hospital, which is akin to a primary care physician. Though 52% reported working at a general practice, the second greatest percentage (26%) reported working at an Emergency and Specialty Center. Approximately 12% of respondents identified themselves within the "other" category, with comments notating employment with they work for the federal government, teaching hospitals, academic or research settings, wildlife rehab, large animal, shelter medicine, sports medicine, and hospitals offering all service options to clients including general care, emergency, and specialty.

Geographic Area of Work

Respondents were asked to classify their geographic working area as suburban, urban, or rural. Approximately 48% of respondents identified as working in a suburban area, while the remainder responded as urban and rural, with percentages of 34% and 16%, respectively.

Shifts Worked Per Week

The greatest percentage (48%) of respondents reported working five to six shifts per week, while 44% reported working three to four shifts each week. Very few respondents work less than three shifts or more than six shifts each week. Hayes et al., 2021, identified a positive correlation between the number of shifts and hours worked each week and overall emotional exhaustion of veterinary nurses.

Shift Times

Approximately 75% of respondents classified the times of their work shifts as dayshift, generally between 8am-8pm. The next greatest percentage (16.8%) of respondents identified themselves as having variable schedules, or a combination of day and night shifts. Only 5.6% of

respondents identified as working mid-shifts (between 4pm and 6pm), while only 2.4% work

nightshifts. Given the percentage of respondents who are employed by an emergency and

specialty center, the percentage of individuals with variable shift times is not surprising, as these

facilities often require staff to fluctuate shift times or work additional shifts to accommodate

patient caseload.

Patient Euthanasia Each Shift

Approximately 38% of respondents experience between one to two patient euthanasia

procedures each shift, while 29% experience zero to one. Only 4.9% have experienced an

average of four to five euthanasia procedures, while 7% note an average of five or more

euthanasia procedures each shift. Other studies have identified patient euthanasia of animal

patients to be directly correlated with compassion fatigue and overall wellbeing of veterinary

professionals (Foster & Maples, 2014; Lloyd & Campion, 2017).

Table 16

Respondent Workplace Characteristics

Hospital type

Response	Percentage (%)	Total
General Practice	52.10%	149
Urgent Care	1.00%	3
Emergency Room	3.80%	11
Specialty Center	4.50%	13
Emergency & Specialty Center	26.20%	75
Other (please specify)	12.20%	35

Geographic Working Area

Response	Percentage (%)	Total
Suburban	49.70%	142
Urban	34.30%	98
Rural	16.10%	46

Shifts per Week (Average)

Response	Percentage (%)	Total
0 to 1	2.10%	6
2 to 3	3.80%	11
3 to 4	44.40%	127
5 to 6	48.30%	138
Greater than 6	1.40%	4

Shift Times

Response	Percentage (%)	Total
Dayshift (between 8a-8p)	75.20%	215
Mid-shift (between 4p-4a or 6p-6a)	5.60%	16
Nightshift (after 8p)	2.40%	9
Variable (combination of above)	16.80%	48

Average Patient Euthanasia Procedures per Shift

Response	Percentage (%)	Total
0 to 1	29.70%	85
1 to 2	38.50%	110
3 to 4	19.90%	57
4 to 5	4.90%	16
5 or more	7.00%	20

Additional Control Variables

Table 17 details descriptive statistics for other control variables of Perceived

Organizational Support (POS), Tobacco Alcohol Prescription drug and Substance abuse (TAPS),

Fear of COVID-19 (FOC), and Self-Compassion (SelfComp). Respondents displayed low to

moderate levels of POS, TAPS, FOC, and SelfComp, with data normally distributed.

Table 17

Descriptive Statistics of Control Variables (N = 284)

						Skewness		Kurtosis	
	Mean	**Median**	**SD**	**Min.**	**Max.**	**Skewness**	**SE**	**Kurtosis**	**SE**
POS	2.68	2.56	1.082	1.0	5.0	0.328	0.145	-0.714	0.288
TAPS	1.71	1.5	0.772	0.75	4.75	1.303	0.145	1.661	0.288
FOC	2.21	2.14	0.898	1.0	4.71	0.323	0.145	-0.78	0.288
SelfComp	2.39	2.33	0.551	1.08	4.08	0.213	0.145	-0.21	0.288

Descriptive Statistics

Descriptive statistics provided below show information about the prevalence of

compassion fatigue, including burnout and secondary traumatic stress, mental illness constructs

of anxiety and depression, and compassion satisfaction. Table 18 outlines the distribution mean,

median, standard deviations, and range of each scale variable.

Prevalence of Compassion Fatigue

Burnout (BO) was measured on a 5-point Likert scale, where 1 = not at all impacted, and

5 = severely impacted. As seen in Table 18, a moderate level of burnout (M = 3.21, SD = 0.495)

was seen across the sample with effects of burnout ranging between a low of 1.90 and a high of

4.60. The range of burnout experienced indicates some individuals were strongly impacted by

the effects of burnout, while others were not.

Secondary traumatic stress (STS) was measured on the same 5-point Likert scale as

burnout, where a response of 5 indicated an individual was severely impacted by this condition.

As seen in Table 18, the sample indicated a moderate level of secondary traumatic stress (M = 3.00, SD = 0.647), with effects of secondary traumatic stress ranging between a low of 1.30 and a high of 3.80. Some individuals reported minimal impact from secondary traumatic stress, while others were severely impacted.

Compassion fatigue was highest among respondent groups between the ages of 26-30, and lowest over the age of 45. This is consistent with a recent study of veterinary nurses and other animal-care professionals that found higher levels of compassion fatigue among younger participants (Scotney, et al., 2019), and provides further evidence for differences in compassion fatigue with age. These findings are contrary to Harvey and Cameron (2020) who state there are no variance in compassion fatigue with age. It is interesting to note that the current study indicates compassion fatigue increased with age initially and then declined after the age of 30. This could indicate that age serves as a protective factor, in which greater life experience helps lower compassion fatigue.

Prevalence of Compassion Satisfaction

Compassion satisfaction (CS) was measured on the same 5-point Likert scale as STS and BO, where a response of 5 is indicative of high compassion satisfaction. Table 18 indicates a moderate level of compassion satisfaction (M = 3.47, SD = 0.59) ranging between a low of 1.30 and a high of 5.00. This indicates some individuals experienced very low levels of compassion satisfaction, while others indicated the highest levels of CS. Interestingly, the sample reported a higher average of CS than both BO and STS.

Prevalence of Anxiety

Anxiety (ANX) was measured on a 4-point Likert scale, where individuals were asked to indicate how often they were experiencing symptoms characteristic of anxiety; 0= not at all, and 3= nearly every day. Table 18 indicates the sample experienced a moderate level of anxiety

(M=1.79, SD = 0.79), with some individuals not experiencing symptoms at all and others experiencing symptoms nearly every day.

Respondent groups between the ages of 26-30 experienced the highest levels of anxiety, while those over the age of 45 experienced the lowest. This is consistent with a recent study of veterinary nurses and other animal-care professionals that found higher levels of compassion fatigue among younger participants (Scotney, et al., 2019), and provides further evidence for differences in compassion fatigue with age. These findings are contrary to Fritschi et al., (2009), in which anxiety was higher among older veterinary professionals. It is interesting to note that the current study indicates anxiety increased with age initially and then declined after the age of 30, thus indicating age as a protective factor, in which greater life experience aids in lowering levels of anxiety.

Prevalence of Depression

Depression (DEP) was measured on a 4-point Likert scale, where respondents were asked to indicate how often they were experiencing symptoms characteristic of a depressive episode ranging from 0 to 3; where a response of 3 reveals symptoms are experienced nearly every day. Table 18 shows a moderate level of depression across the sample (M = 1.53, SD = 0.73), with some individuals reporting not experiencing symptoms at all, and others indicating they experience symptoms every day.

Table 18

	N	Mean	Median	SD	Min.	Max.
BO	284	3.21	3.30	0.49	1.90	4.60
STS	284	3.00	2.90	0.64	1.30	4.80
CS	284	3.47	3.50	0.59	1.30	5.00
ANX	284	1.79	1.86	0.79	0.00	3.00
DEP	284	1.53	1.44	0.73	0.11	3.00

As noted in Chapter 3, the GAD-7 and PHQ-9 instruments contained an additional question requesting respondents indicate how difficult symptoms typical of anxiety or a depressive episode were impacting their daily lives. This question was analyzed on a Likert scale of 1 to 4, in which a response of 1 indicates symptoms were "not difficult at all" or not impacting daily functioning, and a response of 4 indicates symptoms made daily life functioning "extremely difficult". Results for this question are shown in Table 19, indicating the population was experiencing a moderate to high level of anxiety and depression.

Table 19

	N	Mean	Median	SD	Minimum	Maximum
Anxiety impact	284	2.49	2.00	0.79	1.00	4.00
Depression impact	284	2.35	2.00	0.87	1.00	4.00

Significant Differences Among Groups

To determine significant differences between demographic variables with the independent and dependent variables of the study, a one-way ANOVA was performed. Response categories with significant differences were identified via post-hoc analyses with Tukey's test. Tukey's test was utilized in this scenario due to the nature of the variables having more than two categories with assumed equal variances within groups (Tukey, 1949; Midway, et al., 2020). Significant differences among groups, based on variable and category of response, are reported below in Table 22. The categories for which significant differences were found were age, income, shifts per week, and euthanasia procedures each shift, with only significant relationships reported.

Table 20

Differences Among Demographic Groups, Separated by Variable

Variable	Category	Response Groups	Mean Diff.	p
Burnout	Euthanasia per shift (Euth/shift)	0-1/shift, 1-2/shift	-0.21	0.020*
		0-1/shift, 3-4/shift	-0.38	<0.001***
Secondary Traumatic Stress	Age	26-30 yrs, 51-55 yrs	0.78	0.011*
	Tenure-Field (Ten_Field)	7-8 yrs, 12+ yrs	0.38	0.049*
	Shift per week (SPW)	0-1 shift, 6+ shifts	-1.33	0.018*
	Prev. MH Support (MHS)	Yes vs. No	0.21	0.008**
Anxiety	Age	18-25 yrs, 55+ yrs	1.01	0.025*
		26-30 yrs, 36-40 yrs	0.61	0.002**
		26-30 yrs, 55+ yrs	1.12	0.005**
	Income	$20,001-35,000/year, $90,001-100,000	0.72	0.022*
	Tenure	3-4 yrs, 12+ yrs	0.63	< 0.001***
	Field (Ten_Field)	5-6 yrs, 12+ yrs	0.48	0.023*
		7-8 yrs, 12+ yrs	0.62	<0.001***
		11-12 yrs, 12+ yrs	0.59	0.015*
	Euth/shift	0-1/shift, 3-4/shift	-0.42	0.012*
		1-2/shift, 3-4/shift	-0.48	0.001**
Depression	Age	26-30 yrs, 36-40 yrs	0.50	0.013*
	Income	$20,001-35,000/yr, $80,001-90,000/yr	0.70	0.011*
		$20,001-35,000/yr, $90,001-100,000/yr	0.74	0.006**
		$20,001-35,000/yr, 100,000+/yr	0.57	0.002**
		$35,001-50,000/yr, $80,001-90,000/yr	0.59	0.050*
		$35,001-50,000/yr, $90,001-100,000/yr	0.43	0.042*
	Tenure-Field (Ten_Field)	3-4 yrs, 12+ yrs	0.54	0.002*
	Shift/week	0-1 shift/week, 6+ shift/week	-1.40	0.038*
		3-4 shift/week, 6+ shift/week	-1.03	0.046*

	Euth/shift	0-1/shift, 3-4/shift			-0.36	0.038*
Compassion Satisfaction	Euth/shift	0-1/shift, 1-2/shift			0.27	0.015*
		0-1/shift, 3-4/shift			0.36	0.003**

Note. * p < .05, ** p < .01, *** p < .001

Data Eligibility for Hierarchical Regression

To determine full eligibility of the data, several assumptions for autocorrelation, multicollinearity, homoscedasticity, and linearity were tested to assure normality of the data prior to testing the relationships between independent and dependent variables.

Outlier Bias

Outlier analysis was performed and determined to not adversely impact the integrity of the regression models. Cook's distance analysis was evaluated and confirmed that there were no outliers impacting the model. All Cook's distance (Table 22) values were below the threshold of 1, additionally no standard residuals were greater than 3.3 or less than 3.3, also suggesting no outliers were negatively impacting the model (Tabachnick & Fidell, 2019). Table 21 details descriptive statistics of scale variables prior to and after outlier analyses. There were no significant changes in reported means, medians, or standard deviations; as such, all outliers were retained for further analysis.

Table 21

Descriptive Statistics of Scale Variables, Outliers Excluded

Variable	N	Mean	Median	SD	Range	Min.	Max.
BO	276	3.20	3.30	0.461	2.30	2.00	4.30
STS	276	2.99	2.90	0.621	3.20	1.50	4.70
CS	276	3.48	3.50	0.545	2.80	2.00	4.80
ANX	276	1.79	1.86	0.782	3.00	0.00	3.00
DEP	276	1.52	1.44	0.722	3.00	0.11	3.11

Table 22

Cook's Distance for Scale Variables

Indep. Var	Dep. Var	Mean	Median	SD	Range Min	Max
BO	ANX	0.00428	0.00154	0.0075	2.28E-08	0.07
BO	DEP	0.0045	0.00158	0.00864	2.38E-07	0.08
STS	ANX	0.00422	0.00181	0.00687	5.77E-09	0.05
STS	DEP	0.00438	0.00166	0.00704	3.06E-08	0.05

Skewness

Symmetry of negative skewness, or left-skewed distributions, were exhibited by Burnout and Anxiety, with all others indicating positive skewness. Negative skewness in statistical analysis describes a data set with the mean of the distribution is localized to the left of the curve. Often, negative skewness can occur in studies such as this when fewer low answers are given on the Likert Scales. Negative skewness infers fewer people answered "1" or "2" versus higher values such as "4" or "5" on the Likert scales. This indicates a greater affinity for agreement with the statements. Despite negative skewness, the mean and median of each scale variable were similar, with the greatest difference between the two being 0.7 for the Anxiety (ANX) variable. Burnout, Secondary Traumatic Stress, and Compassion Satisfaction scores were between 3.00 to 3.47, indicating moderate levels of these conditions among respondents, based on a five-point Likert scale. This data is considered to fall within normal distribution, as the skewness remains

between -2 and +2, with kurtosis values between -7 and +7, as seen in Table 21 below (Hair et al., 2017).

Internal Reliability

Cronbach's alpha, or the coefficient of reliability, is widely accepted as an internal consistency reliability test that measures the strength of consistency of factors. Factors are identified as individual variables within the survey. Cronbach's alpha is most utilized when there are multiple items with Likert scales.

Cronbach's alpha

To assess the internal reliability of the individual factors comprising each variable, the Cronbach's alpha was performed as shown in Table 23. A satisfactory Cronbach's alpha value is 0.7 or above, indicating the factor is an adequate representation of the variable (Hair et al., 2017; Ringle et al., 2018). For this study, all variables, apart from the TAPS scale, were reported to have a Cronbach's alpha level of 0.69 and above, with the highest obtained being for Anxiety (ANX) and Depression (DEP) with a value of 0.906. Given the reported deficit in reliability of the TAPS instrument, it has been removed from all further analyses.

Table 23

Internal Reliability, Skewness and Kurtosis of Scale Variables

	Items	SD	Cronbach's α	Skewness	Skewness Std. Error	Kurtosis	Kurtosis Std. Error
BO	10	0.46	0.73	-0.30	0.15	-0.46	0.29
STS	10	0.62	0.82	0.11	0.15	-0.43	0.29
CS	10	0.55	0.88	0.11	0.15	0.40	0.29
ANX	7	0.78	0.91	-0.09	0.15	-1.01	0.29
DEP	9	0.72	0.91	0.19	0.15	-0.65	0.29
POSS	8	0.55	0.94	0.33	0.15	-0.71	0.28
FOC	7	0.90	0.90	0.32	0.15	-0.78	0.28
SelfComp	12	0.55	0.83	0.21	0.15	-0.21	0.28

Autocorrelation

The Durbin-Watson statistic available on Jamovi was utilized to perform autocorrelation of the predictor residuals. All values were very close to 2.0, as shown in Table 24, which indicates the residuals were sufficiently independent and uncorrelated (Rajaretnam, 2016). Each model was created for both dependent variables and contained predictors of age, income, tenure in field (TenF), shifts per week (SPW), and euthanasia procedures per shift (EPS) in Model 1, with covariates of POS, TAPS, FOC, and SelfComp in Model 2, and independent variables of BO or STS in Model 3.

Table 24

Durbin–Watson Test for Autocorrelation of Scale Variables

IV	DV	Autocorrelation	DW Statistic	p
BO	ANX	-0.11	2.21	0.064
BO	DEP	0.07	1.89	0.268
STS	ANX	-0.07	2.14	0.236
STS	DEP	0.01	1.97	0.8

Multicollinearity

The variance inflation factor (VIF) and tolerance were utilized to measure multicollinearity, as shown in Table 25. A VIF should not exceed 4.0 and tolerance levels should be greater than or equal to 0.2. If values outside of these ranges were produced, multicollinearity between variables is evident (Hair et al., 2017; Ringle et al., 2015).

Table 25

VIF and Tolerance Ranges to Assess Multicollinearity (ANX)

	VIF Min	VIF Max	Tolerance Min	Tolerance Max
Model 1	1.17	1.33	0.754	0.857
Model 2	1.16	1.33	0.751	0.861
Model 3	1.17	1.33	0.647	0.856

VIF and Tolerance Ranges to Assess Multicollinearity (DEP)

	VIF Min	VIF Max	Tolerance Min	Tolerance Max
Model 1	1.16	1.33	0.754	0.862
Model 2	1.17	1.33	0.751	0.861
Model 3	1.17	1.33	0.647	0.856

Multicollinearity was further examined based on correlations between scale variables. If the multicollinearity of two independent variables exceeds 0.7, this is indicative of similar variation (Tabachnick & Fidell, 2019). There is some correlation between variables as expected, but Pearson correlation coefficients were all below 0.7. Table 26 illustrates the Pearson correlations to further suggest the absence of significant multicollinearity, indicating BO and STS as independent variables have sufficient variations.

Table 26

Correlation Matrix of Scale Variables

		BO	**STS**	**CS**	**ANX**	**DEP**
BO	Pearson's r	—				
	p-value	—				
STS	Pearson's r	0.563***	—			
	p-value	< .001	—			
CS	Pearson's r	-0.633***	-0.196***	—		
	p-value	< .001	< .001	—		
ANX	Pearson's r	0.579***	0.638***	-0.327***	—	
	p-value	< .001	< .001	< .001	—	
DEP	Pearson's r	0.621***	0.676***	-0.336***	0.743***	—
	p-value	< .001	< .001	< .001	< .001	—

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Homoscedasticity

An assumption of linear regression that describes residual error distribution across all values of the independent variable is characterized by homoscedasticity. In this model, no differing residual error distribution across the predictor variable values was found. Residuals for

this study appeared randomly distributed and rectangular in shape, with most scores concentrated in the center. Residuals that are randomly scattered around the zero (0) of the residual scatterplots suggested homoscedasticity (Osborne & Walters, 2002). Figure 5 illustrates a sample residual plot for Model 3.

Figure 5

Scatterplot of Regression Standardized Residual and Predicted Value
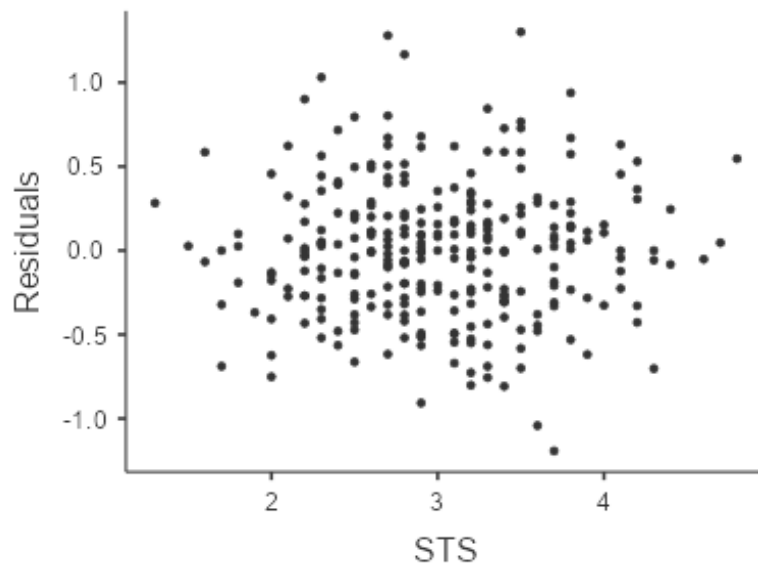
Linearity

Scatterplots of regression standardized residual and predicted value plots were used to assess linearity. Visual inspection of residual plots suggested a linear relationship, detailed by the appearance of randomly distributed points (Osborne & Walters, 2002). This process was repeated for each independent variable with both dependent variables, with evidence of a linear relationship found in all plots. Figure 6 below illustrates a sample plot of regression standardized residual.

Figure 6

Plot of Regression Standardized Residual
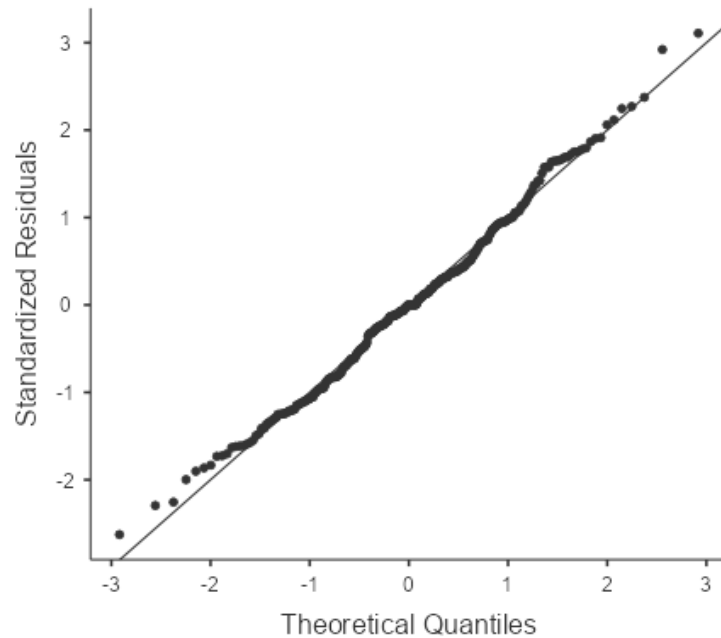
Normality

Dependent variables, ANX and DEP, had distributions that were significant according to the Kolmogorov-Smirnov test. After controlling for demographic variables of age, income, tenure in field, shifts per week, and euthanasia procedures each shift, POS, TAPS, FOC, and SelfComp. Table 27 reports all relevant Kolmogorov-Smirnov values.

With BO as an independent variable, Kolmogorov-Smirnov values for ANX and DEP ranged between 0.0468 (p = 0.561) and 0.0521 (0.423), respectively. When considering Secondary Traumatic Stress as an independent variable, ANX and DEP had Kolmogorov-Smirnov values of 0.0395 (p = 0.769) and 0.074 (p = 0.984). All reported p-values for this analysis are above 0.05, indicating the variables followed a normal distribution. Figure 4 (above) further supports this analysis, as the normal probability plot suggests evidence that residuals

were normally distributed, represented by a straight-line relationship (Tabachnick & Fidell, 2019).

Table 27

Kolmogorov-Smirnov: Normality of Scale Variables

IV	DV	Statistic	p
BO	ANX	0.0521	0.423
BO	DEP	0.0468	0.561
STS	ANX	0.0395	0.769
STS	DEP	0.0274	0.984

Hypothesis Testing

To test the relationship between independent and dependent variables, a hierarchical regression analysis was performed. To determine the eligibility of data, several assumptions were tested to assure normality. Full results of hierarchical regression models are available in Appendix C.

Hypothesis 1 Testing

H1a: Burnout accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables.

H1b: Secondary Traumatic Stress accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables and burnout.

Hypothesis 1a and 1b Results

Hierarchical regression was utilized to determine the relationship between burnout and secondary traumatic stress with anxiety, as shown in Table 28. Model 1 includes the control variables of gender, age, race, marital status, income, region/country of residence, tenure in veterinary field, current position, tenure in current position, hospital type, geographic area of work, shifts worked per week, shift times, and euthanasia exposure, and accounts for 14.6% of

variance in anxiety (Adj Rsq= 0.146, F (83, 200), p = 0.005); only significant relationships are reported. Variables of Perceived Organizational Support (POSS), Fear of COVID-19 (FOC-19), and Self-Compassion (SelfComp) were added in Model 2 and account for an additional 21.3% of variance in anxiety (Δadj Rsq = 0.213, F (86, 197), p <0.001). Burnout was added in Model 3, accounting for an additional 12.7% of variance in anxiety (Δadj Rsq = 0.127, F (87, 196), p <0.001). Finally, secondary traumatic stress was added in Model 4, accounting for an additional 4.5% of variance in anxiety (Δadj Rsq = 0.045, F (88, 195), p <0.001). The full model with all the predictors and controls accounts for 53.1% of the variation in Anxiety, Adj Rsq = 0.531.

An examination of the standardized coefficients in Model 4 (Appendix C) reveals the independent variable of burnout is the strongest predictor (ß = 0.317, p <0.001). Secondary traumatic stress as an independent variable, was found to be the next strongest predictor of anxiety (ß = 0.293, p < 0.001). Self-compassion (ß = -0.213, p <0.001) and Fear of COVID-19 (ß = 0.116, p = 0.003) were also found to be significant predictors in the full model, indicating individuals with higher levels of self-compassion were less likely to experience anxiety, and those with greater fear of COVID-19 were more likely to experience anxiety. Several personal and employment factors of respondent age, marital status, and tenure in the veterinary field were significant predictors until the addition of burnout in Model 3. Interestingly, hospital type, as a control variable, has a significant influence in Model 3, with individuals employed by urgent care hospitals experiencing being significantly more likely to experience anxiety compared to those employed by other types of hospitals; notably, only two respondents indicated employment at an urgent care hospital (ß = 1.125, p = 0.024). Given these results, hypothesis 1a and 1b are supported.

Table 28

Model Fit Measures for the Effect of BO and STS on Anxiety

Variable	F	df1	df2	ß	Adj. R^2	$\Delta AdjR^2$
Model 1	1.58	83	200		0.146**	0.146**
Marital Status						
Cohab. w/ partner				0.42**		
Tenure in Field						
7-8 years				1.41**		
11-12 years				1.48**		
Model 2	2.85	86	197		0.359***	0.213***
Age						
Over 55 years				-0.98**		
Marital Status						
Cohab. w/ partner				0.41**		
Tenure in Field						
7-8 years				1.04**		
11-12 years				1.38**		
Fear of COVID-19				0.16**		
Self-Compassion				-0.40**		
Model 3	4.08	87	1.96		0.486***	0.127***
Hospital type:						
Urgent Care				1.13**		
Perceived Org Support				0.13**		
Fear of COVID-19				0.16**		
Self-Compassion				-0.26***		
Burnout				0.45***		
Model 4	4.65	88	195		0.531***	0.450***
Self-Compassion				-0.21***		
Fear of COVID-19				0.12*		
Burnout				0.32***		
Secondary Traumatic Stress				0.29***		

*Note. n=284. p< 0.001***, p < 0.01**, p<0.05**

Hypothesis 2 Testing

H2a: Burnout accounts for a statistically significant amount of variance in Depression after accounting for all control variables.

H2b: Secondary traumatic stress accounts for a statistically significant amount of variance in Depression after accounting for all control variables and burnout.

Hypothesis 2a and 2b Results

Hierarchical regression was utilized to determine the relationship between burnout and depression. As shown in Table 29, Model 1, includes the control variables of gender, age, race, marital status, income, region/country of residence, tenure in veterinary field, current position, tenure in current position, hospital type, geographic area of work, shifts worked per week, shift times, and euthanasia exposure, and accounts for 16.3% of variance in depression (Adj Rsq = 0.163, F (83, 200), p = 0.002); only significant relationships are reported. Variables of Perceived Organizational Support (POS), Fear of COVID-19 (FOC), and Self-Compassion (SelfComp) were added in Model 2 and account for an additional 21.8% of variance in depression (Δadj Rsq= 0.218, F (86, 197), p <0.001). Next, burnout was added in Model 3 as an independent variable, accounting for an additional 15.7% of variance in depression (Δadj Rsq= 0.157, F (87, 196), p < 0.001). Finally, secondary traumatic stress was added in Model 4, accounting for an additional 4.4% of variance in depression (Δadj Rsq= 0.044, F (88, 195), p < 0.001). The full model with all predictors and controls accounts for 58.2% of the variation in depression, Adj Rsq – 0.582.

An examination of standardized coefficients in Model 4 (Appendix C) reveal the independent variables of burnout (ß=0.368, p< 0.001) and secondary traumatic stress (ß = 0.287, p < 0.001) are significant, but not the best predictors of depression. Notably, several control variables appear to be stronger predictors of depression in the full model. Hospital type as a

control variable is the strongest predictor of depression with individuals employed by an urgent

care being significantly more likely to experience depression (ß = 1.01, p = 0.029), notably,

responses designated to this category are the lowest of all hospital types. The next strongest

predictor is the control variable tenure in the veterinary field, with individuals having 3-4 years

of tenure (ß= 0.813, p = 0.034) and those having 11-12 years of tenure (ß= 0.871, p= 0.042)

being more likely to experience depression than those with less than one year of experience. The

next strongest predictor of depression is the control variable of shift times; individuals working

nightshift hours being significantly more likely to experience depression than those working

dayshift hours (ß = 0.801, p =0.014). The only other significant predictors in the full model,

Model 3, were Fear of COVID-19 (ß = 0.096, p = 0.05), and Self-Compassion (ß = -0.188, p

<0.001). Still, burnout and secondary traumatic stress remain significant predictors of depression

even after controlling for several other variables. Given these findings, Hypothesis 2a and 2b are

supported.

Table 29

Model Fit Measures for the Effect of BO and STS on Depression

Variable	F	df1	df2	ß	Adj. R^2	$\Delta AdjR^2$
Model 1	1.67	83	200		0.163**	0.163**
Country/US Rgn of Residence						
US, Southeast				0.42*		
US, Pacific Northwest				0.64*		
Tenure in Field						
3-4 years				1.33*		
7-8 years				0.99*		
9-10 years				1.94*		
11-12 years				1.72*		
Shift/week						
6+ shifts/week				1.84**		
Shift time				0.96*		
Night shift				0.96**		
Model 2	3.03	83	197		0.381***	0.218***

Race						
Hispanic, Latino				2.15*		
Marital						
Cohab. w/ partner				0.34*		
Tenure in Field						
1-2 years				0.92*		
3-4 years				1.24*		
5-6 years				1.02*		
7-8 years				0.93*		
9-10 years				1.10*		
11-12 years				1.61**		
12+ years				0.98*		
Hospital Type						
Urgent Care				1.27*		
Shift time						
Night shift				1.04**		
Fear of COVID-19				0.15*		
Self-Compassion				-0.39***		
Model 3	4.79	87	196		0.538***	0.157***
Tenure in Field:						
3-4 years				0.85*		
11-12 years				0.99*		
Hospital Type						
Urgent Care				1.46**		
Shift time						
Night shift				0.96**		
Fear of COVID-19				0.15**		
Self-Compassion				-0.23***		
Burnout				0.50***		
Model 4	5.48	88	195		0.582***	0.044***
Tenure in Field:						
3-4 years				0.81*		
11-12 years				0.87*		
Hospital Type						
Urgent Care				1.01*		
Shift time						
Night shift				0.80*		
Self-Compassion				0.18***		
Fear of COVID-19				0.09*		
Burnout				0.36***		
Secondary Traumatic Stress				0.28***		

Note. n=284. p< 0.001***, p < 0.01**, p< 0.05*

Hypothesis 3 Testing

To examine the effects of each of the independent variables of burnout (BO), secondary traumatic stress (STS), and compassion satisfaction (CS) on anxiety (ANX), I first performed a hierarchical regression analysis, as seen in Table 30. Model 1 includes control variables of gender, age, race, marital status, income, region/country of residence, tenure in veterinary field, current position, tenure in current position, hospital type, geographic area of work, shifts worked per week, shift times, and euthanasia exposure, and accounts for 14.6 % of variance in anxiety (adj Rsq= 0.146, $F_{(83, 200)}$, p =0.005). Model 2 includes controls for perceived organizational support, Fear of COVID-19, and self-compassion, accounting for an additional 21.3% of variance in anxiety (Δadj Rsq= 0.213, $F_{(86, 200)}$, p <0.001). Model 3 introduces compassion satisfaction as an independent variable, and accounts for an additional 4.5% of variance in anxiety (Δadj Rsq= 0.045, $F_{(87, 197)}$, p <0.001). Model 4 introduces burnout as an independent variable, accounting for an additional 8% of variance in anxiety (Δadj Rsq = 0.080, $F_{(88, 195)}$, p < 0.001). Finally, Model 5 introduces secondary traumatic stress, accounting for an additional 5% of variance in anxiety (ΔadjRsq = 0.050, $F_{(89, 194)}$, p <0.001).

An examination of the standardized coefficients in Model 5 (not shown in table, see Appendix C), indicates that secondary traumatic stress (ß= 0.313, p<0.001) is the strongest predictor of anxiety, followed by burnout (ß= 0.247, p =0.003), self-compassion (ß= -0.218, p<0.001), and fear of COVID-19 (ß= 0.109, p <0.037. Interestingly, the control variable of tenure in the veterinary field was the most significant predictor of anxiety in Models 1 to 3, prior to the addition of burnout and secondary traumatic stress in Models 4 and 5, respectively.

Table 30

Model Fit Measures for the Effect of CS, BO, and STS on Anxiety

Variable	F	df1	df2	ß	Adj. R²	ΔAdjR²
Model 1	1.58	83	200		0.146**	0.146**
Marital						
Cohab. w/ partner				0.422*		
Tenure in Field						
7-8 years				1.41*		
11-12 years				1.48*		
Model 2	2.85	86	197		0.359***	0.213***
Marital						
Cohab. w/ partner				0.41*		
Tenure in Field						
7-8 years				1.04*		
11-12 years				1.38**		
Fear of COVID-19				0.16**		
Self-Compassion				-0.40***		
Model 3	3.2	87	196		0.404***	0.045***
Gender						
Non-Binary				1.31*		
Marital						
Cohab. w/ partner				0.36**		
Tenure in Field						
11-12 years				1.10*		
Fear of COVID-19				0.16**		
Self-Compassion				-0.37***		
Compassion Satisfaction				-0.24***		
Model 4	4.02	88	195		0.484***	0.08***
Hospital type						
Urgent care				1.15**		
Perceived Org. Support				0.13*		
Fear of COVID-19				0.16**		
Self-Compassion				-0.26***		
Burnout				0.43***		
Model 5	4.65	89	194		0.534***	0.05***
Fear of COVID-19				0.10*		
Self-Compassion				-0.22***		
Burnout				0.25**		
Secondary Traumatic Stress				0.31***		

*Note. n=284. p< 0.001***, p < 0.01**, p< 0.05**

To test for the moderating effects of CS, moderation analyses were completed on Jamovi using the bootstrapping method. Bootstrapping allows for sampling of the data with replacement to provide estimates of correlation coefficients, in addition to the generation of confidence intervals for those coefficients (Hayes, 2009). This methodology has performed well when compared to other traditional methods (MacKinnon et al., 2004; Williams & MacKinnon, 2008).

H3a: Compassion Satisfaction moderates the relationship between Burnout (BO) and Anxiety among a population of veterinary nurses, with the strength of the relationship between BO and Anxiety reducing as Compassion Satisfaction increases.

Hypothesis 3a Results

Moderation analyses were completed on Jamovi using the bootstrapping method to determine if CS moderates the relationship between BO and ANX. Bootstrapping allows for sampling of the data with replacement to provide estimates of correlation coefficients, in addition to the generation of confidence intervals for those coefficients (Hayes, 2009). This methodology has performed well when compared to other traditional methods (MacKinnon et al., 2004; Williams & MacKinnon, 2008). As seen in Table 31 below, BO has a significant relationship (p <0.01) with ANX, but interaction effects of CS and BO are not significant (p = 0.543). Thus, hypothesis 3a is not supported.

Table 31

Moderation Estimates of CS on the relationship of BO and ANX

	Estimate	SE	Z	p
BO	0.9865	0.0993	9.931	< .001
CS	0.0825	0.0841	0.981	0.327
BO ✳ CS	0.0496	0.0815	0.608	0.543

H3b: Compassion Satisfaction moderates the relationship between Secondary

Traumatic Stress (STS) and Anxiety among a population of veterinary nurses, with the

strength of the relationship between STS and Anxiety reducing as Compassion

Satisfaction increases.

Hypothesis 3b Results

The following moderation analyses were completed on Jamovi using the bootstrapping

method to determine the impact of CS on the relationships between STS and ANX. As seen in

Table 33 below, STS has a significant relationship (p <0.001) with ANX, CS has a direct effect

on ANX (p < .001), and the interaction effects of CS and STS are significant (p < .001), thus

supporting hypothesis 3b that Compassion Satisfaction moderates the relationship between

Secondary Traumatic Stress (STS) and Anxiety among a population of veterinary nurses.

Table 32

Moderation Estimates, CS on STS and ANX

	Estimate	SE	Z	p
STS	0.733	0.0486	15.08	< .001
CS	-0.294	0.0585	-5.03	< .001
STS ✳ CS	0.207	0.0636	3.26	0.001

Hypothesis 4 Testing

To examine the effects of each of the independent variables of burnout (BO), secondary

traumatic stress (STS), and compassion satisfaction (CS) on depression (DEP), I first performed

a hierarchical regression analysis, as shown in Table 33, please note that only significant

relationships are reported below, full models available in Appendix C. Model 1 includes control

variables of gender, age, race, marital status, income, region/country of residence, tenure in

veterinary field, current position, tenure in current position, hospital type, geographic area of

work, shifts worked per week, shift times, and euthanasia exposure, and accounts for 16.3% of

variance in depression (Δadj Rsq= 0.163, F (83, 200), p =0.001). Model 2 includes controls for

perceived organizational support, fear of COVID-19, and self-compassion, accounting for an additional 22.6% of variance in depression (Δadj Rsq= 0.218, F (86, 197), p <0.001). Model 3 introduces compassion satisfaction as an independent variable, and accounts for an additional 5.3% of variance in depression (Δadj Rsq= 0.053, F (87, 196), p <0.001). Model 4 introduces burnout as an independent variable, accounting for an additional 10.2% of variance in anxiety (Δadj Rsq = 0.102, F (88, 195), p < 0.001). Finally, Model 5 introduces secondary traumatic stress, accounting for an additional 5.0% of variance in depression (Δadj Rsq = 0.050, F (89, 194), p <0.001).

An examination of the standardized coefficients in Model 5 (not shown in table, see Appendix C) reveal secondary traumatic stress (ß= 0.315, p < 0.001) and burnout (ß= 0.299, p < 0.001) are significant, but not the best predictors of depression. Several control variables seem to be stronger predictors of depression. The most significant predictor of depression is the control variable of shift times, with individuals working night shift hours being more likely to experience depression (ß= 0.812, p < 0.010). The second strongest predictor of depression is control variable of tenure in the veterinary field, with individuals having 3-4 years of tenure (ß= 1.021, p = 0.012) being significantly more likely to experience depression than those with less than one year of tenure. The only other significant predictors of depression in the full model, Model 5, were fear of COVID-19 (ß=0.095, p < 0.046) and Self-Compassion (ß = -0.192, p <0.001). Still, secondary traumatic stress and burnout remain significant predictors of depression even after controlling for several other predictors

Table 33

Model Fit Measures for the Effect of CS, BO, and STS on Depression

Variable	F	df1	df2	ß	Adj. R^2	$\Delta AdjR^2$
Model 1	1.67	83	200		0.163**	0.163**
US Region						
Southeast				0.422*		
Tenure in Field						
3-4 years				1.32*		
7-8 years				1.31*		
9-10 years				1.19*		
11-12 years				1.72**		
Shift/week						
6+ shifts				1.84*		
Shift time						
Nightshift				0.95*		
Model 2	3.03	86	197		0.381***	0.218***
Race						
Hispanic or Latino				2.15*		
Marital Status						
Cohab. w/ partner				0.33*		
Tenure in Field						
1-2 years				0.92*		
3-4 years				1.24**		
5-6 years				1.02*		
7-8 years				1.10*		
9-10 years				1.61**		
12+ years				0.98*		
Hospital Type						
Urgent Care				1.27*		
Shift time						
Nightshift				1.04**		
Fear of COVID-19				0.14*		
Self-Compassion				-0.39***		
Model 3	3.5	87	196		0.434***	0.053***
Gender:						
Non-binary				1.29*		
Tenure in Field:						
3-4 years				1.03*		
12+ years				1.32**		
Current Position						

2 – 0				-0.85*		
Hospital type						
Urgent Care				1.54**		
Shift time						
Nightshift				1.22**		
Fear of COVID-19				0.15**		
Self-Compassion				-0.36***		
Compassion Satisfaction				-0.26***		
Model 4	4.72	88	195		0.536***	0.102***
Tenure in Field						
3-4 years				0.84*		
11-12 years				0.98*		
Hospital Type						
Urgent Care				1.47**		
Shift time						
Nightshift				0.97**		
Fear of COVID-19				0.14**		
Self-Compassion				-0.23***		
Burnout				0.48***		
Model 5	5.47	89	194		0.584***	0.048***
Tenure in Field						
3-4 years				0.78*		
Hospital type						
Urgent Care				1.05*		
Shift time						
Nightshift				0.85**		
Self-Compassion				-0.19***		
Burnout				0.30***		
Secondary Traumatic Stress				0.30***		

*Note. n=284. p< 0.001***, p < 0.01**, p< 0.05*￼*

     To test for the moderating effects of CS, moderation analyses were completed on Jamovi using the bootstrapping method. Bootstrapping allows for sampling of the data with replacement to provide estimates of correlation coefficients, in addition to the generation of confidence intervals for those coefficients (Hayes, 2009). This methodology has performed well when compared to other traditional methods (MacKinnon et al., 2004; Williams & MacKinnon, 2008).

H4a: Compassion Satisfaction moderates the relationship between Burnout (BO) and

Depression (DEP) among a population of veterinary nurses with the strength of the relationship

between BO and DEP reducing as Compassion Satisfaction increases.

Hypothesis 4a Results

Moderation analyses were completed on Jamovi using the bootstrapping method to

determine if CS moderates the relationship between BO and DEP. Bootstrapping allows for

sampling of the data with replacement to provide estimates of correlation coefficients, in addition

to the generation of confidence intervals for those coefficients (Hayes, 2009). This methodology

has performed well when compared to other traditional methods (MacKinnon et al., 2004;

Williams & MacKinnon, 2008). As seen in Table 34 below, BO has a significant relationship (p

<0.001) with DEP, but interaction effects of CS and BO are not significant ($p = 0.543$). Thus,

hypothesis 4a is not supported.

Table 34

Moderation Estimates of CS on BO and DEP

	Estimate	SE	Z	p
BO	1.0249	0.0899	11.394	< .001
CS	0.1260	0.0789	1.598	0.110
BO ✳ CS	-0.0625	0.0723	-0.864	0.388

H4b: Compassion Satisfaction moderates the relationship between Secondary Traumatic

Stress (STS) and Depression (DEP) among a population of veterinary nurses with the strength of

the relationship between STS and DEP reducing as Compassion Satisfaction increases.

Hypothesis 4b Results

The following moderation analyses were completed on Jamovi using the bootstrapping

method to determine the impact of CS on the relationships between STS and DEP. As seen in

Table 35 below, STS has a significant relationship ($p <0.001$) with ANX, CS has a direct effect

on ANX ($p < .001$), and the interaction effects of CS and STS are significant ($p < .001$), thus

supporting hypothesis 4b that Compassion Satisfaction moderates the relationship between

Secondary Traumatic Stress (STS) and Depression (DEP) among a population of veterinary

nurses.

Table 35

Moderation Estimates of CS on STS and DEP

	Estimate	SE	Z	p
STS	0.726	0.0453	16.03	< .001
CS	-0.271	0.0554	-4.89	< .001
STS ✶ CS	0.122	0.0592	2.07	0.039

Summary

This study examined the relationship of Compassion Fatigue, represented as Burnout and

Secondary Traumatic Stress, on Anxiety and Depression, as well as the role of Compassion

Satisfaction among these relationships. Survey data was collected from a sample of veterinary

nurses to explore the proposed research questions and test hypotheses. Data eligibility and

assumption testing were performed before conducting hierarchical regression analysis to test the

relationships. Table 34 summarizes the results of the study.

Table 36

Summary of Results

No.	Hypothesis	Results	Reference
1a.	Burnout accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables.	Supported	Table 28
1b.	Secondary Traumatic Stress accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables and burnout.	Supported	
2a.	Burnout accounts for a statistically significant amount of variance in Depression after accounting for all control variables.	Supported	Table 29
2b.	Secondary traumatic stress accounts for a statistically significant amount of variance in Depression after accounting for all control variables and burnout.	Supported	
3a.	Compassion Satisfaction moderates the relationship between Burnout (BO) and Anxiety (ANX) among a population of veterinary nurses with the strength of the relationship between BO and ANX reducing as Compassion Satisfaction increases.	Not Supported	Table 31
3b.	Compassion Satisfaction moderates the relationship between Secondary Traumatic Stress and Anxiety (ANX) among a population of veterinary nurses with the strength of the relationship between STS and ANX reducing as Compassion Satisfaction increases.	Supported	Table 32
4a.	Compassion Satisfaction moderates the relationship between Burnout (BO) and Depression (DEP) among a population of veterinary nurses with the strength of the relationship between BO and DEP reducing as Compassion Satisfaction increases.	Not Supported	Table 34
4b.	Compassion Satisfaction moderates the relationship between Secondary Traumatic Stress (STS) and Depression (DEP) among a population of veterinary nurses with the strength of the relationship between STS and DEP reducing as Compassion Satisfaction increases.	Supported	Table 35

CHAPTER 5: DISCUSSION, IMPLICATIONS & CONCLUSIONS

This chapter provides a discussion of findings from this research including implications for theory and practice, and suggestions for future research. The analyses conducted for the hypotheses are summarized and research findings are explained drawing upon the literature on the topic to draw connections and comparisons. Limitations of the study are identified to assert appropriate comparison to previous studies. Finally, I discuss the significance of this research in the light of the contributions it makes to theory and practice.

Summary of the Study

Veterinary nurses are critical members of the healthcare team, working directly with veterinarians, pet owners, and animal patients, causing exposure to several stressors including long working hours, often unmanageable workloads, physically demanding work, and hazardous working environments (Black, et al., 2011). In addition to this, veterinary nurses also experience stress because of the emotional demands of their job which involves managing the demands of pet owners and coping with the decisions of euthanasia on animal patients they have cared for (Black, et al., 2011; Scotney, et al., 2019). Repeated exposure to the suffering of non-human animals has been noted to cause a heighted state of mental and emotional tension, resulting in the development of Compassion Fatigue (Huggard & Huggard, 2008; Harvey, 2020; Coetzee and Klopper, 2010; Stamm) that may result in mental illness such as anxiety or depression. Understanding the relationship between compassion fatigue and mental illness is crucial to the prevention of the emotional exhaustion from traumatic situations that can ultimately have negative impacts on veterinary nurses, resulting in ineffective and apathetic workers who are experiencing high levels of compassion fatigue and mental illness (Overfield, 2012; Deacon & Brough, 2016; Harvey, 2020; Kogan, et al., 2020).

Previous studies have indicated veterinarians are at increased risk of developing compassion fatigue and mental illnesses, however limited research is available to assess the incidence and severity of these conditions among veterinary nurses (Bartram, et al., 2009; Bartram and Baldwin, 2010; Scotney, et al., 2019; Kogan, et al., 2020). Veterinary nurses experience occupational and psychological stressors at a significantly higher rate than veterinarians or other team members (O'Brien, et al., 2021, Harvey & Cameron, 2020, Liss, et al., 2020), which draws attention to the need to study the relationship between compassion fatigue and mental illness among veterinary nurses.

This study examined the prevalence of Compassion Fatigue, Anxiety and Depression, and the relationships between Compassion Fatigue and mental illness constructs of Anxiety, and Depression among a population of veterinary nurses. Further, the role of Compassion Satisfaction on these relationships was examined. Four research questions and six hypotheses were used to guide the study:

Research Question 1 (RQ1): What is the effect of compassion fatigue on anxiety among a population of veterinary nurses after controlling for personal, workplace, and employment factors?

Hypothesis 1a: Burnout accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables.

Hypothesis 1b: Secondary traumatic stress accounts for a statistically significant amount of variance in Anxiety after accounting for all control variables and burnout.

Research Question 2 (RQ2): What is the effect of compassion fatigue on depression among a population of veterinary nurses after controlling for personal, workplace, and employment factors?

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Hypothesis 2a: Burnout accounts for a statistically significant amount of variance in Depression after accounting for all control variables.

Hypothesis 2b: Secondary Traumatic Stress accounts for a statistically significant amount of variance in Depression after accounting for all control variables and burnout.

Research Question 3 (RQ3): How does Compassion Satisfaction (CS) moderate the relationship between Compassion Fatigue and Anxiety among a population of veterinary nurses?

Hypothesis 3a: Compassion Satisfaction moderates the relationship between Burnout (BO) and Anxiety among a population of veterinary nurses, with the strength of the relationship between BO and Anxiety reducing as Compassion Satisfaction increases.

Hypothesis 3b: Compassion Satisfaction moderates the relationship between Secondary Traumatic Stress (STS) and Anxiety among a population of veterinary nurses, with the strength of the relationship between STS and Anxiety reducing as Compassion Satisfaction increases.

Research Question 4 (RQ4): How does Compassion Satisfaction (CS) moderate the relationship between Compassion Fatigue and Depression among a population of veterinary nurses?

Hypothesis 4a: Compassion Satisfaction moderates the relationship between Burnout (BO) and Depression among a population of veterinary nurses, with the strength of the relationship between BO and Depression reducing as Compassion Satisfaction increases.

Hypothesis 4b: Compassion Satisfaction moderates the relationship between Secondary Traumatic Stress (STS) and Depression among a population of veterinary nurses, with the strength of the relationship between STS and Depression reducing as Compassion Satisfaction increases.

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The results of this study imply a Compassion Fatigue accounts for a statistically significant amount of variance in anxiety and depression, even after controlling for several demographic, employment, and organizational variables. In addition to this, Compassion Satisfaction acts as a moderator in the relationship between Secondary Traumatic Stress and Anxiety. Compassion Satisfaction also moderated the relationship between Secondary Traumatic Stress and Depression. Compassion Satisfaction did not moderate the relationship of Burnout with Anxiety, and Depression.

Discussion of Results

In this section, I first discuss results related to the prevalence of compassion fatigue among veterinary nurses. Secondly, I discuss the implications of the results that support hypotheses that burnout and secondary traumatic stress account for additional variance in mental illness constructs of anxiety and depression over and beyond what is accounted for by demographic, employment, and organizational control variables. Thirdly, I discuss the implications of the results that examine the moderating role of compassion satisfaction on the relationship between compassion fatigue and mental illness constructs of anxiety and depression. Fourthly, I offer a post-study model and continue to provide implications for research and practice. Finally, I offer my conclusions highlighting the significance of this study.

Prevalence of Compassion Fatigue, Anxiety, and Depression

The results of this study indicate the population was moderately impacted by Compassion Fatigue, with an average burnout score of 3.7 and an average secondary traumatic stress score of 3.0; both variables were measured on a Likert scale of 1-5, where 5 indicates respondents were severely impacted. Respondents were also moderately impacted by Anxiety and Depression, with an average score of 1.79 for Anxiety and 1.53 for Depression; both variables were measured

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on a 4-point Likert scale of 0-4, where 4 indicates respondents were experiencing symptoms nearly every day.

Levels of burnout and secondary traumatic stress, which contribute to compassion fatigue, were highest among respondent groups between the ages of 26-30, and lower among respondents over the age of 45. This is consistent with a recent study of veterinary nurses and other animal-care professionals that found higher levels of compassion fatigue among younger participants (Scotney, et al., 2019), and provides further evidence for differences in compassion fatigue with age. These findings are contrary to Harvey and Cameron (2020) who state there is no variance of compassion fatigue with age, as well as Fritschi et al., (2009) that levels of anxiety are higher among older veterinary professionals. It is interesting to note that the current study indicates compassion fatigue and anxiety increased with age initially and then declined after the age of 30. This could indicate that age serves as a protective factor, in which greater life experience helps lower compassion fatigue.

Significant relationships were found between depression and respondent age. Individuals within the age range of 26 to 30 years-old reported the highest levels of depression among the age groups, while individuals between 36 to 40 years and over 55 years-old reported the lowest levels of depression.

In the current study, levels of compassion fatigue and anxiety were higher for females than males; these findings align with other studies of veterinary professionals (Harvey & Cameron, 2020; Scotney, et al., 2019; O'Brien, et al., 2021). Levels of compassion fatigue and anxiety were also higher among individuals those who identify as who non-binary and those who prefer to self-describe. This finding demands further investigation with larger sample sizes for these demographic groups.

Burnout was highest among participants who identified as Asian and lowest among those identifying as White or Caucasian. This finding is interesting and calls for greater attention to studying burnout among different racial groups. Levels of secondary traumatic stress and anxiety were highest among individuals who identified as multiracial or biracial. This finding suggests the need for further investigation with larger sample sizes for these demographic groups. Many studies omit racial designation from studies (Elmore, 2003; Witte, et al., 2020; Liss, et al., 2020), and this study addressed that gap. Further studies could build on these findings to offer unique perspectives on lived experiences of previous traumas or lack of racial equity. Although most veterinary professionals currently in the field identify as White or Caucasian it is important to understand racial differences as the field evolves, and create a culture that is supportive of all individuals from any backgrounds.

Variance of compassion fatigue and anxiety were seen when marital status was examined. Married individuals had lower levels of compassion fatigue and anxiety than those reporting as single or cohabitating with a partner. Divorced respondents experienced levels of compassion fatigue and anxiety that were comparable to those reporting as single. These findings are contrary to findings of previous research of veterinarians (Jaworski et al., 2021; Chigerwe et al., 2021), and human medical nurses (Jarrad et al., 2018) which identified higher levels of burnout and overall psychological distress, including anxiety, in married respondents.

Burnout levels were highest among individuals with annual household incomes between $35,001-$50,000 and lowest among individuals with annual incomes between $90,001-$100,000. A 2016 survey of veterinary nurses indicated low income and high burnout rates as two of the top stressors among respondents (NAVTA, 2016). Levels of secondary traumatic stress and anxiety were also highest among individuals with annual household incomes between $20,001-

35,000 per year, and lowest among individuals with annual household incomes greater than $100,000. Additionally, depression had significant relationships with participant annual household income. In the current study, as income increased, depression among participants decreased. These results are also demonstrated by several studies linking income and depression among general populations (Guan, et al., 2022; Rudenstein, et al., 2021) and veterinary professionals (Tran et al., 2014). These findings indicate a significant relationship between compassion fatigue and income with mental illnesses of anxiety and depression that currently remains unaddressed and reveals a need for further studies in this area to investigate how income levels impact compassion fatigue, anxiety, and depression. Currently, no studies have addressed this this among veterinary nurses.

Significant relationships were found between secondary traumatic stress, anxiety, and tenure in the veterinary field. Individuals with seven to eight years of experience in the veterinary field had the highest level of secondary traumatic stress and anxiety. These results confirm results of another study of veterinary professionals (Scotney et al., 2019). Individuals reporting tenure of over ten years experienced the lowest levels of secondary traumatic stress and anxiety. This could indicate tenure as a protective factor of anxiety after being in the field for more than ten years. Tenure could contribute to overall comfortability in handling emergent situations, making these individuals more confident in their skills and less prone to developing anxiety or secondary traumatic stress. Tenure in the veterinary field also had a significant relationship with compassion fatigue and depression among respondents. Individuals reporting tenure of less than two years or more than twelve years had the lowest levels of depression among the population. Alternatively, depression levels remained relatively constant between tenure of five to twelve years, with those reporting three to four years of experience also having

the highest depression levels. In this case, tenure after five years bears the impact of a protective factor against depression. To date, only one veterinary specific study indicates a significant relationship between tenure and depression levels, in which depression was lower for veterinarians with longer tenure (Tran, et al., 2014).

The type of veterinary hospital a respondent was employed by also shows interesting results. Though the majority (52%) of respondents were employed by a general veterinary practice, individuals employed by standalone emergency hospitals and combination emergency and specialty hospitals consistently indicated higher levels of burnout, secondary traumatic stress, and anxiety. This may be because these types of hospitals notoriously receive the most life-threatening, high acuity, or terminal cases, ultimately contributing to veterinary nurses' heightened occupational and psychological stressors. This finding suggests the need for future research that probes deeper into differences of hospital type and how this may affect veterinary nurses at a personal level.

Secondary traumatic stress and anxiety were significantly higher among participants working more than six shifts per week. Individuals working overnight shifts reported higher levels of burnout which is consistent with a study of veterinary nurses (Liss et al., 2020). This is not surprising, as nightshift veterinary nurses are victim to lower staffing numbers, indicating higher patient ratios and the requirement for a larger workload. Additionally, working overnight has previously been correlated with poor sleep hygiene, leading to a heighted level of burnout (Liss et al., 2020). Depression and burnout were also found to have a significant relationship with the number of shifts an individual worked each week. As the number of shifts worked increased, depression also increased. Individuals working six or more shifts each week reported depression levels that were almost double the reported level of individuals working less than

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three shifts each week. Several studies of human healthcare nurses have indicated the correlation between depression and shiftwork, in which those working variable shifts also experienced higher levels of depression (Hall, et al., 2018; Booker, et al., 2020); however, there are no previous studies within the veterinary context.

Significant differences in burnout and anxiety were found based on the number of euthanasia procedures (EPS) performed on each shift. Levels of burnout, anxiety and depression continually increased with the number of euthanasia procedures performed until a level of 3-4 was reached, after which the effects declined. Limited studies (Scotney et al., 2017; Knesl et al., 2017; Marton et al., 2020) have investigated the interactions between burnout and exposure to euthanasia. The findings of this study suggest exposure to euthanasia serves as a protective factor to the development of burnout, anxiety and depression after a specific threshold and should be explored further.

There was a significant difference in secondary traumatic stress and anxiety between those who had previously pursued or received mental health support and those who had not. Interestingly, respondents who had previously received mental health support indicated higher levels of secondary traumatic stress. This may be because these individuals have previously experienced stressful situations that have caused lasting impacts.

Though marital status, hospital type, and region of residence did not have statistically significant relationships with depression, these variables indicated fluctuations among respondents' depression levels that should be reviewed further. Individuals who reported being single or separated from their partner were presented with the highest levels of depression, with those reporting as married having the lowest levels of depression. Regarding hospital type, depression levels were highest among individuals working in veterinary urgent care or

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emergency settings, and lowest among those employed by general practices; Jaworski, et al., (2022) is the only veterinary specific study to date asserting hospital type is linked to depression levels among a population of veterinary students, indicating similar results to the current study. Respondents' region of residence also shows reasonable differences between the United States and Canada; with Canadian respondents indicating the lowest levels of depression. Levels of depression were consistent across all United States regions.

Impact of Compassion Fatigue on Anxiety

Results of this study indicate that burnout and secondary traumatic stress explain a statistically significant amount of variance in anxiety among a population of veterinary nurses, after accounting for demographic, employment, and organizational control variables. Additionally, both burnout and secondary traumatic stress were found to be significant predictors of anxiety. These results suggest that those who experienced a higher degree of burnout and secondary traumatic stress were also more likely to experience a higher level of anxiety. Current results are consistent with findings from previous research on populations of veterinarians (Bartram & Baldwin, 2010; Brscic, et al., 2021), veterinary students (McArthur, et al., 2017), animal shelter workers, animal laboratory workers (Hayes, et al., 2019; Randall, et al., 2021), and veterinary nurses (Harvey & Cameron, 2020; Kogan, et al., 2020). This study also reinforces the idea that the physical and psychological impacts of burnout often result in prolonged stress levels that culminate in the development of anxiety, ultimately disrupting an individual's ability to function (Bartram & Baldwin, 2010; Brscic, et al., 2021; Harvey & Cameron, 2020; Kogan, et al., 2020).

Impact of Compassion Fatigue on Depression

The results of this study indicate that burnout and secondary traumatic stress explain a statistically significant amount of variance in depression among a population of veterinary

nurses, and act as a significant predictor of depression, even after controlling for after accounting for demographic, employment, and organizational control variables.

Respondents reporting higher levels of secondary traumatic stress also indicated higher levels of depression. These results were consistent with several studies of veterinarians and veterinary nurses, indicating burnout and secondary traumatic stress can stand as a predecessor to the development and impacts of depression (McArthur, et al., 2017; O'Brien, et al., 2021; Lloyd & Campion, 2017).

Role of Compassion Satisfaction

Moderation analyses found that compassion satisfaction did not have a significant moderating effect on the relationship between burnout and anxiety. However, compassion satisfaction did have a moderating effect on the relationship between secondary traumatic stress and anxiety. The absence of a moderating effect of Compassion Satisfaction on the relationship between burnout with anxiety and depression suggests that the effects of burnout are so strong that the effects of compassion satisfaction are not strong enough to make a positive difference, even with high levels of compassion satisfaction that were evidenced in this sample. This draws attention to the detrimental effects of burnout. Though an individual might be pleased overall with the level of compassion satisfaction they obtain from their job the positive effects of caregiving are diminished when burnout is present.

No studies were found that were specific to examining the role of compassion satisfaction in the relationship between burnout and anxiety among veterinary nurses. However, burnout has been identified as a stronger predictor of anxiety and depression than secondary traumatic stress, even in the presence of compassion satisfaction in a small population of police officers (Davies et al., 2022). There is evidence of compassion satisfaction functioning as a moderator of burnout, job satisfaction, and traumatic experiences (Burtson & Stichler, 2010; Lee, et al., 2013; Ames, et

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al., 2017) and a mediator on patient safety management among literature of general healthcare nurses (Ryu, et al., 2021). Conceivably, the caretaking of animals may contribute to the lack of moderation effects of compassion satisfaction with burnout and depression; as people suffering from burnout often feel their contributions are not making a positive impact and are highly likely to disengage from their patients and overall work (Stamm, 2010).

Compassion satisfaction was found to have a significant moderating effect on the relationship between secondary traumatic stress and anxiety, indicating the presence of compassion satisfaction can lessen the impact of secondary traumatic stress on anxiety, and is still able to offer positive effects of caregiving. Veterinary nurses who experience secondary traumatic stress are likely to develop flashbacks of situations, making them more prone to the development of anxiety (Scotney, et al., 2019; Scotney, et al., 2017, Stamm, 2010). When individuals experience compassion satisfaction, the presence of this positive influence (Orru, et al., 2021; Lee, et al., 2017) decreases the overall impact of the trauma, reducing the symptoms of distress and leading to lesser anxiety. This study provides evidence on a previously overlooked interaction effect of secondary traumatic stress and compassion satisfaction, in which the cultivation of compassion satisfaction can serve as a protective factor against anxiety and offers deeper implications for veterinary professionals.

Compassion satisfaction was also found to have a significant moderating effect on the relationship between secondary traumatic stress and depression. When examining the moderating role of compassion satisfaction on the relationship between secondary traumatic stress and depression, findings are indicative of a more complex relationship. Symptoms of secondary traumatic stress often mimic those of post-traumatic stress, increasing the likelihood of experiencing traumatic flashbacks, which can lead to the development of depression. When

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compassion satisfaction is added as moderator in the relationship between secondary traumatic stress and depression, the overall impact of traumatic instances becomes less severe therefore causing less symptoms of distress including depression (Scotney, et al., 2019; Scotney, et al., 2017, Stamm, 2010). Secondary traumatic stress and depression have a well-established and significant relationship outlined in other avenues of literature (Orru, et al., 2021; Lee, et al., 2017; Barleycorn, 2019; Shoji, et al., 2015), however, with the dearth of literature examining the role of compassion satisfaction in this relationship, this study offers some unique insights for individuals and organizations seeking to improve compassion satisfaction in addition to future research.

Post Study Model

Based on the results of this study, I present a post-study model to explain the relationship between compassion fatigue and anxiety and depression in Figures 7 and 8. Burnout and Secondary Traumatic Stress had significant effects on levels of anxiety and depression among the population of veterinary nurses. Though compassion satisfaction did not have significant moderating effects on the relationship of burnout with anxiety and depression, it indicate ability to moderate relationships of secondary traumatic stress with anxiety and depression.

Figure 7

Post Study Model of the Impact of Compassion Fatigue and Compassion Satisfaction on Anxiety
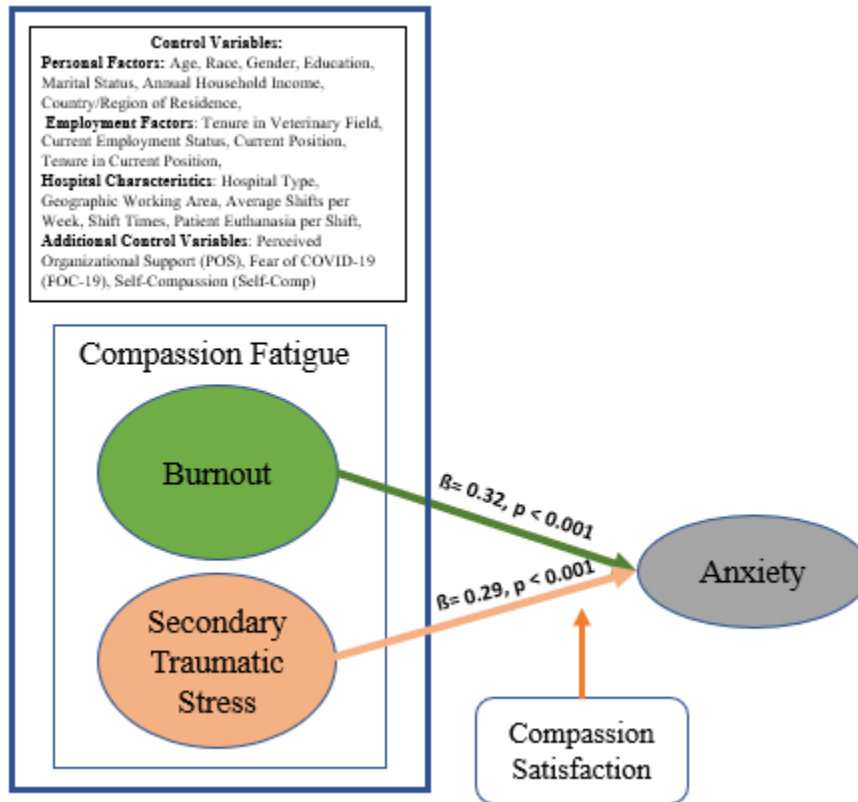
Figure 8

Post Study Model of the Impact of Compassion Fatigue and Compassion Satisfaction on Depression
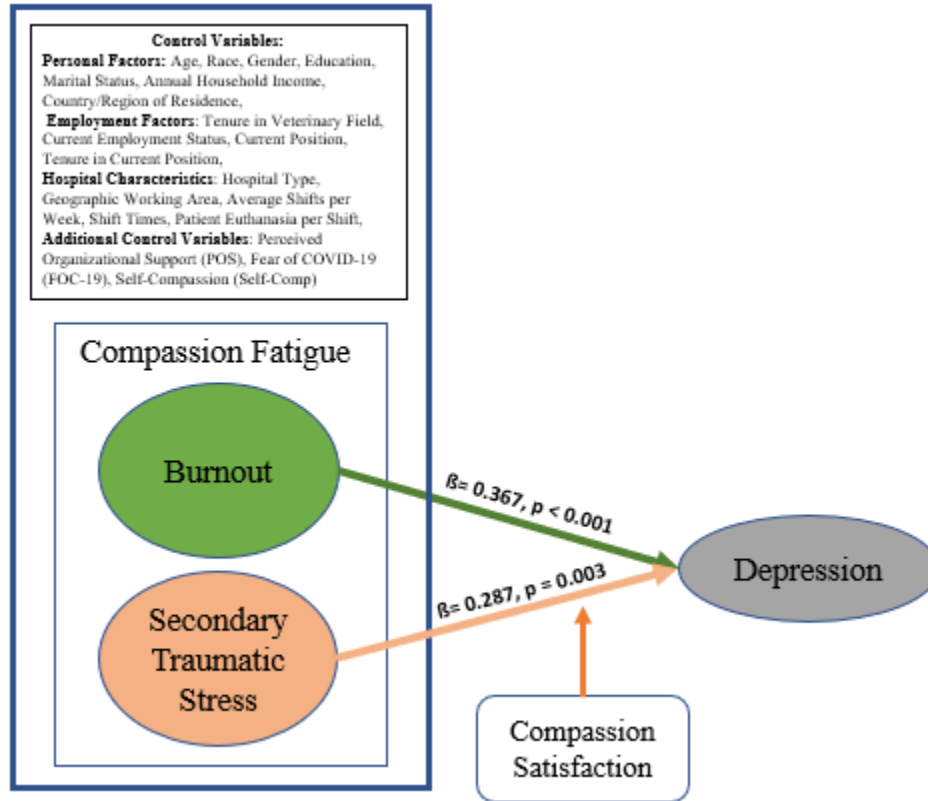
Limitations

Random sampling could not be adopted for this study, and thus it is a limitation of this study that the sample may not be representative of the population. Cross-sectional survey data used in this study was taken at a single point in time, thus data and corresponding results cannot be interpreted as causal, but do suggest the presence or absence of a predictive relationship between variables. Due to the lack of temporal sequence addressed in the results of this study, future research should consider the use of wave analysis to detect differences from different sources or timepoints while the survey instrument remains active. Additionally, the self-response nature of the survey instrument does offer statistical limitations, in which full honesty in

responses cannot be detected and therefore can falsely impact results. Regarding overall statistical analyses, the use of Cook's distance to detect outliers does offer limitations, in which truly influential outliers may not have been detected given the sensitivity of the full data set. Future studies should consider utilizing Mahalanobis distance to detect influential outliers. The hierarchical multiple regression technique utilized also offers limitations, despite the steps taken to remove the possibility of making a Type 1 error, the use of multiple multivariate analyses would offer better insight into the causal relationship between independent and dependent variables by permitting all to be contained in one analysis.

Implications for Research and Practice

The findings of this study indicate distinct relationships between compassion fatigue, comprised of burnout and secondary traumatic stress, with mental illness constructs of anxiety and depression, as well as the role compassion satisfaction had in these relationships. Compassion satisfaction was found to moderate relationships between secondary traumatic stress with anxiety and depression. The lack of moderating effect on the relationship of burnout with anxiety and depression also offers significant findings representative of the debilitating effects of burnout. In this case, compassion satisfaction can remain high in times of increased stress, but does not offer protective effects against the severity of burnout. To maximize the benefits of compassion satisfaction, organizations can consider interventions for wellbeing or continuing education trainings that foster the positive aspects of caregiving and minimize effects of secondary traumatic stress.

Many individuals join the veterinary profession because they derive intense passion and joy from their work. Despite the positive feelings derived from their work, many individuals overwork themselves, or are required to work additional hours due to staffing or general workplace demands, therefore deepening the susceptibility to developing burnout. Moreover,

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results of the current study indicate respondents were experiencing moderate to high levels of

compassion satisfaction, while also experiencing moderate levels of burnout and secondary

traumatic stress. The effects of burnout are so severe that no amount of compassion satisfaction

can decrease its effects, highlighting the importance of organizational interventions that may

mitigate its negative effects.

Individuals who have a greater sense of camaraderie with their peers in their workplace

have been found to experience a lower level of emotional stress, therefore lessening the impact

of secondary traumatic stress (Caringi et al., 2016), burnout (Schwartz et al., 2019), and anxiety

(Nevarez et al., 2017). Camaraderie among teams creates a sense of psychological safety in the

workplace, in which individuals feel they are supported, leading to lower levels of burnout and

improves overall resilience (Schwartz et al., 2019). Future research investigating organizational

policies and interventions that focus on collaborative efforts to cultivate camaraderie,

psychological safety, and resilience will provide further insight in understanding how these may

moderate the relationship of burnout with anxiety and depression.

The moderation effect of compassion satisfaction in the relationship of secondary

traumatic stress with anxiety and depression has implications for veterinary practices,

individuals, higher education institutions, and other caretaking fields. Ongoing organizational

and cultural interventions that aid in the cultivation of compassion satisfaction will provide

additional resiliency and act as a protective factor to reduce the overall risks of secondary

traumatic stress, anxiety, and depression.

Literature representative of compassion fatigue and mental illness among veterinary

nurses is limited, thereby contributing to the lack of organizational interventions focused on

improving their levels of compassion satisfaction. The current study adds to the literature relating

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to the role of compassion satisfaction in the relationship of compassion fatigue with anxiety and depression among veterinary nurses, and offers several opportunities for future research in this field.

The moderating role of compassion satisfaction in the relationships between secondary traumatic stress and mental illness constructs of anxiety and depression should be explored further to cultivate greater compassion satisfaction among veterinary nurses. Additionally, implications for mitigation strategies related to burnout, anxiety and depression should be explored further to greater understand these relationships and identify potential mediators or moderators that could impact levels of compassion satisfaction. The role of euthanasia exposure and its potential protective factors over a specific threshold, should also be investigated further to understand the dynamics of this occupational stressor among veterinary nurses, and can be used to operationalize industry standards for how these exposures should be handled among veterinary nurses.

This study also offers insights for future research on understanding more deeply the factors that contribute to burnout, as the effects of burnout on anxiety and depression are so strong. Additionally, studies that consider other potential mediators or moderators in the relationship between burnout with anxiety and depression should be explored. Qualitative studies that examine how individuals perceive, utilize, and understand compassion satisfaction can offer insights at an individual level. Studies should also be conducted at an organizational level to explore what strategies may be successful in developing compassion satisfaction.

This study used several control variables such as perceived organizational support, self-compassion that were shown to have a negative impact on anxiety and depression. Individuals with higher levels of perceived organizational support and self-compassion demonstrated lower

levels of both anxiety and depression, indicating their distinct roles in the potential development or prediction of development for anxiety and depression. Further studies exploring these variables as mediators or moderators would be very useful to see what role they can play in reducing anxiety and depression among those in the caring professions.

This study also utilized exposure to patient euthanasia procedures as a control variable. Findings indicate this should be investigated further to understand the dynamics of this occupational stressor among veterinary nurses, as results show a potential protective effect of exposure to patient euthanasia over a certain threshold. Future research on the exact role of euthanasia exposure and how it impacts veterinary nurses would offer opportunities to create major cultural change or guidelines across the field.

Findings from this study also offer implications for higher-education institutions, indicating veterinary nurses should receive formal training to address the identification of compassion fatigue, understanding of how this condition impacts those in the veterinary field, and how to cope with the emotions that results as an effect. Such trainings will offer individuals with additional resources prior to their full entry into the veterinary field and should decrease the probability of an individual developing anxiety and depression because of their work. Additionally, results of this study can offer additional understanding of the relationship of compassion fatigue with anxiety and depression that is applicable to other caring professions such as general healthcare nurses, educational, military, and mental health professionals.

Workplace Demands and Environment

A common theme across variables of secondary traumatic stress, anxiety, and depression indicated significant differences relating to personal and employment factors of age, income, tenure in the veterinary field, and shifts worked each week. Similarly, the exposure to euthanasia procedures was evident among variables of burnout, secondary traumatic stress, anxiety,

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depression, and compassion satisfaction. These results indicate that organizational interventions should be focused on reducing risks and impacts within these areas.

The discussion of the income levels has remained consistent across literature representative of veterinary populations (Foster & Maples, 2014; Liss et al., 2020; Robinson et al., 2019). Furthermore, individuals working more shifts each week have presented with higher levels of psychological distress and experience higher levels of compassion fatigue (O'Brien et al., 2021); such results indicate more attention should be focused on revenue production of the veterinary practice to improve compensation packages and decrease the necessity for veterinary nurses to work more shifts each week. Results relating to the tenure of individuals within the veterinary field indicate efforts should be focused on individuals with lesser years of experience, perhaps allowing more tenured employees who have shown greater ability to cope with compassion fatigue to mentor those with less experience.

The impact of euthanasia exposure on veterinary nurses has been associated with higher levels of compassion fatigue, anxiety and depression, and lower levels of compassion satisfaction. Interventions targeting the effects of euthanasia exposure should be considered to offer additional support in mitigating negative impacts with the hope of preventing or preserving individuals from developing more serious conditions of anxiety and depression due to the overwhelming emotional aspect of euthanasia procedures.

Role of Perceived Organizational Support

Higher levels of perceived organizational support (Eisenberger, 1986) have been found as a crucial factor in the development of compassion satisfaction, while also reducing levels of burnout, anxiety (Reitz et al., 2021), and depression (Marton et al., 2020). In the current study, the significance of employment factors and demographic control variables of tenure in the veterinary field, income, shifts worked each week, and exposure to euthanasia procedures,

indicate that organizational interventions should be focused to develop perceived organizational support in these areas. Veterinary nurses have previously reported their workplace could support their mental wellbeing by increasing time off to access help when needed, decrease working or on-call hours, and promoting general wellbeing (O'Brien et al., 2021). Organizational interventions should be multifaceted strategies to promote mental and physical wellbeing among veterinary nurses, and reduce the risk factors related to workplace stressors of overworking, euthanasia exposure and improve perceived organizational support.

Organizational efforts to decrease compassion fatigue, anxiety, and depression among veterinary nurses should include resources such as ongoing professional development workshops (O'Brien et al., 2021), support groups (Marton et al., 2020), or employment of veterinary social workers (Holcombe et al., 2016) to enhance the ability to cope with occupational and psychological stressors and cultivate perceived organizational support.

The introduction of trauma-informed leadership practices that focus on recognition of traumatic exposure, reduction of situations that enforce re-traumatization, create systems for addressing trauma exposure, and full evaluation of organizational policies and leadership practices will be beneficial for reducing the impact of secondary traumatic stress and therefore lessen the propensity to develop anxiety and depression because of occupational situations (Fleishman et al., 2019). Leaders within veterinary practices should receive extensive education relating to compassion fatigue and mental illness so they can quickly identify and intervene within employee situations of heighted stressors or crises.

The Role of Self-Compassion

In addition to the impacts of perceived organizational support, there is evidence that self-compassion, or the ability to be kind to oneself (Neff, 2003), can also lessen the impacts of compassion fatigue, anxiety, and depression, and therefore indirectly cultivate higher levels of

compassion satisfaction (Yip et al., 2016). Higher levels of self-compassion have also been shown to assist in an individual's ability to cope with patient death (Galiana et al., 2022), aligning with the current study's finding indicating the impact of euthanasia exposure on levels of compassion fatigue, anxiety, depression, and compassion satisfaction. An individual's level of self-compassion has also been found to act as a predictive variable of compassion fatigue (Galiana et al., 2022), anxiety, and depression (Kotera et al., 2020). Results of the current study indicate the moderating role of compassion satisfaction in relationship of secondary traumatic stress with anxiety and depression. Keeping this in mind, steps should be taken within veterinary practices to assist veterinary nurses in the development of self-compassion. In practice, improving self-compassion of veterinary nurses could be accomplished via mindfulness or meditation workshops, which have been known to increase the ability to recognize one's own struggles and identify ways to cope (Neff et al., 2014). When used in tandem with improved perceived organizational support, self-compassion permits veterinary nurses to feel they are supported externally by their practice, and internally via an improved relationship with themselves, thereby reducing compassion fatigue, anxiety, and depression, and improving their propensity to have or develop compassion satisfaction.

<div align="center">**Conclusions**</div>

Findings from the current study indicate compassion fatigue acts as a significant predictor of anxiety and depression among veterinary nurses. Further, this study found that compassion satisfaction moderates the relationship of secondary traumatic stress with mental illness constructs of anxiety and depression. This finding indicates the necessity to utilize tactics that will assist veterinary nurses by mitigating the negative effects of secondary traumatic stress via the development of compassion satisfaction. Results also indicate that, despite an individual's ability to experience high levels of compassion satisfaction, the effects of burnout are so severe

that the positive effects of compassion satisfaction cannot mitigate its negative effects. This finding is also significant and points to distinct relationships of burnout with anxiety and depression.

The study suggests leaders in veterinary hospitals should consider and implement ongoing organizational support systems to benefit the overall wellbeing of their veterinary nurses, thereby decreasing the possibility that compassion fatigue develops into anxiety and depression. Results indicate several individual and employment factors that should be considered in the development of future organizational interventions to improve overall wellbeing for veterinary nurses, including gender, race, age, working hours, and hospital type. Veterinary nurses are an essential unit of every veterinary hospital. Their efforts in the workplace and personal sacrifices should be recognized with positive organizational interventions that include them as a vital part of the veterinary team. Such interventions will maximize the positive aspects of caregiving and offer distinct advantages in improving business outcomes that will make great strides towards creating a happier, healthier workforce.

References

Adam, A., Schwartz, R. P., Wu, L. T., Subramaniam, G., Laska, E., Sharma, G., ... & McNeely, J. (2019). Electronic self-administered screening for substance use in adult primary care patients: feasibility and acceptability of the tobacco, alcohol, prescription medication, and other substance use (myTAPS) screening tool. *Addiction Science & Clinical Practice*, *14*(1), 1-12. https://doi.org/10.1186/s13722-019-0167-z

Adimando, A. (2018). Preventing and alleviating compassion fatigue through self-care: An educational workshop for nurses. *Journal of Holistic Nursing, 36*, 304–317. https://doi.org/ 10.1177/0898010117721581

Amjad, R., & Rafique, R. (2013). Quality of life at work as predictor of job commitment in 1122 rescue workers. Pakistan Journal of Psychology, 44(1), 81–93.

American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders, Text Revision Dsm-5-Tr.* S.L., Amer Psychiatric, 2022.

Ames, M., Salmond, E., Holly, C., & Kamienski, M. (2017). Strategies that reduce compassion fatigue and increase compassion satisfaction in nurses: A systematic review protocol. *JBI Evidence Synthesis*, *15*(7), 1800-1804. https://doi.org/10.11124/JBISRIR-2016-003142

Arimon-Pagès, E., Torres-Puig-Gros, J., Fernández-Ortega, P., & Canela-Soler, J. (2019). Emotional impact and compassion fatigue in oncology nurses: Results of a multicentre study. *European Journal of Oncology Nursing*, *43*, 101666.

Ashforth, B., & Lee, R. (1991). On the meaning of Maslach's three dimensions of burnout. *Journal of Applied Psychology*, 75(6), 743–747, https://doi.org/10.1037/0021-9010.75.6.743.

Barleycorn, D. (2022). Awareness of secondary traumatic stress in emergency

nursing. *Emergency Nurse*, *30*(5).

Bartram, D. J., Yadegarfar, G., & Baldwin, D. S. (2009). A cross-sectional study of mental

health and well-being and their associations in the UK veterinary profession. *Social*

Psychiatry and Psychiatric Epidemiology, 44(12), 1075-1085.

https://doi.org/10.1007/s00127-009-0030-8

Bakker, A.B., Le Blanc, P., & Schaufeli, W.B. (2005). Burnout contagion among critical care

nurses. *Journal of Advanced Nursing*, 51, 276–287. https://doi.org/10.1111/ j.1365-

2648.2005.03494.x

Beard, C., Hsu, K. J., Rifkin, L. S., Busch, A. B., & Bjorgvinsson, T. (2016) Validation of the

PHQ-9 in a psychiatric sample. J Affective Disorders, 193, 267-273.

https://doi.org/10.1016/j.jad.2015.12.075

Bellolio, M. F., Cabrera, D., Sadosty, A. T., Hess, E. P., Campbell, R. L., Lohse, C. M., &

Sunga, K. L. (2014). Compassion fatigue is similar in emergency medicine residents

compared to other medical and surgical specialties. *Western Journal of Emergency*

Medicine, *15*(6), 629. https://doi.org/10.5811/westjem.2014.5.21624

Bennett, P., & Rohlf, V. (2005). Perpetration-induced traumatic stress in persons who euthanize

nonhuman animals in surgeries, animal shelters, and laboratories. *Society & Animals*,

13(3), 201-220. https://doi.org/10.1163/1568530054927753

Bhutani, J., Bhutani, S., Balhara, Y. P. S., & Kalra, S. (2012). Compassion fatigue and burnout

amongst clinicians: a medical exploratory study. *Indian Journal of Psychological*

Medicine, *34*(4), 332-337. https://doi.org/10.4103/0253-7176.108206

Bianchi, R., Schonfeld, I. S., & Laurent, E. (2015). Burnout–depression overlap: A

    review. *Clinical psychology review*, *36*, 28-41. https://doi.org/10.1016/j.cpr.2015.01.004

Black, A. F., Winefield, H., & Chur-Hansen, A. (2011). Occupational stress in veterinary nurses:

    Roles of the work environment and own companion animal. *Anthrozoos, 24,* 191–202.

    https://doi.org/10.2752/ 175303711X12998632257503

Booker, L. A., Sletten, T. L., Alvaro, P. K., Barnes, M., Collins, A., Chai-Coetzer, C. L., ... &

    Howard, M. E. (2020). Exploring the associations between shift work disorder,

    depression, anxiety, and sick leave taken amongst nurses. *Journal of sleep*

    research, *29*(3). https://doi.org/10.1111/jsr.12872

Bride, B. E., Radey, M., & Figley, C. R. (2007). Measuring compassion fatigue. *Clinical social*

    work journal, *35*(3), 155-163. https://doi.org/10.1007/s10615-007-0091-7

Brscic, M., Contiero, B., Schianchi, A., & Marogna, C. (2021). Challenging suicide, burnout,

    and depression among veterinary practitioners and students: text mining and topics

    modelling analysis of the scientific literature. *BMC veterinary research*, *17*(1), 1-10.

    https://doi.org/10.1186/s12917-021-03000-x

Budd, C. (2012). Aspects of employee drug abuse in veterinary practice. *Veterinary Nursing*

    Journal, *27*(3), 112-114. https://doi.org/10.1111/j.2045-0648.2012.00156.x

Burtson PL, Stichler JF. (2010). Nursing work environment and nurse caring: relationship among

    motivational factors. *Journal of advanced nursing.* 66(8):1819-1831.

Caringi, J. C., Hardiman, E. R., Weldon, P., Fletcher, S., Devlin, M., & Stanick, C. (2017).

    Secondary traumatic stress and licensed clinical social workers. *Traumatology*, *23*(2),

    186. https://doi.org/10.1037/trm0000061

Chen, H., & Eyoun, K. (2021). Do mindfulness and perceived organizational support work? Fear of COVID-19 on restaurant frontline employees' job insecurity and emotional exhaustion. *International journal of hospitality management*, *94*, 102850. https://doi.org/10.1016/j.ijhm.2020.102850

Chigerwe, M., Barter, L., Dechant, J. E., Dear, J. D., & Boudreaux, K. A. (2021). A preliminary study on assessment of wellbeing among Veterinary Medical House officers. *PLOS ONE*, *16*(6). https://doi.org/10.1371/journal.pone.0253111

Coetzee, S., & Klopper, H. (2010). Compassion fatigue within nursing practice: A concept analysis. Nursing & Health Sciences, 12(2), 235-243. Doi:10.1111/j.1442-2018.2010.00526.x

Cole, A. H. (2014). "Anxiety", in Encyclopedia of Psychology and Religion, ed. D.A. Leeming. (Boston, MA: Springer), 95–99. https://doi.org/10.1007/978-1-4614-6086-2_38

Cook, T. D., and Campbell, D. T. (1979). *Quasi-Experimentation: Design & analysis issues for field settings*. Wadsworth Publishing Company.

Craigie, M., Osseiran-Moisson, R., Hemsworth, D., Aoun, S., Francis, K., Brown, J., ... & Rees, C. (2016). The influence of trait-negative affect and compassion satisfaction on compassion fatigue in Australian nurses. *Psychological Trauma: Theory, Research, Practice, and Policy*, *8*(1), 88. https://doi.org/10.1037/tra0000050

Crane, M. F., Phillips, J. K., & Karin, E. (2015). Trait perfectionism strengthens the negative effects of moral stressors occurring in veterinary practice. *Australian veterinary journal*, *93*(10), 354-360. https://doi.org/10.1111/avj.12366

Davies, L. E., Brooks, M., & Braithwaite, E. C. (2022). Compassion fatigue, compassion satisfaction, and burnout, and their associations with anxiety and depression in UK police

officers: A mixed method analysis. *The Police Journal*.
https://doi.org/10.1177/0032258X221106107

Deacon, R. E., & Brough, P. (2017). Veterinary nurses' psychological well-being: The impact of
patient suffering and death. *Australian Journal of Psychology*, 69(2), 77–85.
https://doi.org/10.1111/ajpy.12119

Debski, M., Abdelaziz, H. K., Sanderson, J., Wild, S., Assaf, O., Wiper, A., ... & Choudhury, T.
(2021). Mental health outcomes among British healthcare workers—lessons from the first
wave of the COVID-19 pandemic. *Journal of occupational and environmental
medicine*, *63*(8). https://doi.org/10.1097/JOM.0000000000002279

Demerouti, E., Verbeke, W. J. M. I., & Bakker, A. B. (2005). Exploring the relationship between
a multidimensional and multifaceted burnout concept and self-rated performance. *Journal
of Management,* 31, 186–209. https://doi.org/10.1177/0149206304271602

Ding, Y., Qu, J., Yu, X., and Wang, S. (2014). The mediating effects of burnout on the
relationship between anxiety symptoms and occupational stress among community
healthcare workers in China: a cross-sectional study. *PLoS ONE:9.*
https://doi.org/10.1371/journal.pone.0107130

Duan, X., Ni, X., Shi, L., Zhang, L., Ye, Y., Mu, H., Li, Z., Liu, X., Fan, L., & Wang, Y. (2019).
The impact of workplace violence on job satisfaction, Job Burnout, and turnover intention:
The mediating role of Social Support. *Health and Quality of Life Outcomes*, *17*(1).
https://doi.org/10.1186/s12955-019-1164-3

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational
support. *Journal of Applied Psychology*, *71*(3), 500–507. https://doi.org/10.1037/0021-
9010.71.3.500

Elmore, R. G. (2004). Reasons for the lack of racial diversity in veterinary medicine. *Journal of veterinary medical education*, *31*(4), 414-416. https://doi.org/10.3138/jvme.31.4.414

Epp, K. (2012). Burnout in critical care nurses: A literature review. Dynamics, 23(4), 25-31.

Epp, T., & Waldner, C. (2012). Occupational health hazards in veterinary medicine: physical, psychological, and chemical hazards. *The Canadian Veterinary Journal*, *53*(2), 151.

Faulkner, B. (2016). Compassion fatigue versus burnout (I): what's the difference?. In *BSAVA Congress Proceedings 2016* (pp. 67-76). BSAVA Library.

Fava, M., Alpert, J. E., Carmin, C. N., Wisniewski, S. R., Trivedi, M. H., Biggs, M. M., ... & Rush, A. J. (2004). Clinical correlates and symptom patterns of anxious depression among patients with major depressive disorder in STAR* D. *Psychological medicine*, *34*(7), 1299-1308. https://doi.org/10.1017/S0033291704002612

Figley, C. R. (1995). Compassion fatigue as secondary traumatic stress disorder-An overview. *Compassion fatigue*.

Figley, Charles R. *Treating Compassion Fatigue*. Routledge, 2013.

Figley, C. R., & Roop, R. G. (2006). *Compassion fatigue in the animal-care community*. Humane Society Press.

Foli, K. J., Reddick, B., Zhang, L., & Krcelich, K. (2020). Substance use in registered nurses: "I heard about a nurse who...". *Journal of the American Psychiatric Nurses Association*, *26*(1), 65-76. https://doi.org/10.1177/1078390319886369

Foster, S. M., & Maples, E. H. (2014). Occupational Stress in Veterinary Support Staff. *Journal of Veterinary Medical Education*, *41*(1), 102–110. https://doi.org/10.3138/jvme.0713-103r

Fowler, H. N., Holzbauer, S. M., Smith, K. E., & Scheftel, J. M. (2016). Survey of occupational hazards in Minnesota veterinary practices in 2012. *Journal of the American Veterinary Medical Association*, *248*(2), 207-218. https://doi.org/10.2460/javma.248.2.207

Fritschi, L., Morrison, D., Shirangi, A., & Day, L. (2009). Psychological well-being of Australian veterinarians. *Australian veterinary journal*, *87*(3), 76-81. https://doi.org/10.1111/j.1751-0813.2009.00391.x

Green, S. B. (1991). How many subjects does it take to do a regression analysis. *Multivariate Behavioral Research*, 26, 499–510. doi: 10.1207/s15327906mbr2603_7.

Greenhill, L. M., & Carmichael, K. P. (2014). Survey of college climates at all 28 US colleges and schools of veterinary medicine: preliminary findings. *Journal of veterinary medical education*, *41*(2), 111-121. https://doi.org/10.3138/jvme.0513-075R1

Gribben, J. L., Kase, S. M., Waldman, E. D., & Weintraub, A. S. (2019). A cross-sectional analysis of compassion fatigue, burnout, and compassion satisfaction in pediatric critical care physicians in the United States. *Pediatric Critical Care Medicine*, *20*(3), 213-222. https://doi.org/10.1097/PCC.0000000000001803

Gryczynski, J., McNeely, J., Wu, L. T., Subramaniam, G. A., Svikis, D. S., Cathers, L. A., ... & Schwartz, R. P. (2017). Validation of the TAPS-1: a four-item screening tool to identify unhealthy substance use in primary care. *Journal of General Internal Medicine*, *32*(9), 990-996. https://doi.org/10.1007/s11606-017-4079-x

Guan, N., Guariglia, A., Moore, P., Xu, F., & Al-Janabi, H. (2022). Financial stress and depression in adults: A systematic review. *PloS one*, *17*(2). https://doi.org/10.1371/journal.pone.0264041

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage.

Hall, A. L., Franche, R. L., & Koehoorn, M. (2018). Examining exposure assessment in shift work research: a study on depression among nurses. *Annals of Work Exposures and Health*, *62*(2), 182-194. https://doi.org/10.1093/annweh/wxx103

Hamric, A., & Blackhall, L. (2007). Nurse-physician perspectives on the care of dying patients in intensive care units: Collaboration, moral distress, and ethical climate. *Critical Care Medicine*, 35(2), 422-429. https://doi.org/10.1097/01.CCM.0000254722.50608.2D

Harvey, L. C., & Cameron, K. E. (2020). Stress and compassion fatigue in veterinary nurses in New Zealand. *The Veterinary Nurse*, *11*(1), 42-46.

Hayes, G. M., LaLonde-Paul, D. F., Perret, J. L., Steele, A., McConkey, M., Lane, W. G., ... & Jones-Bitton, A. (2020). Investigation of burnout syndrome and job-related risk factors in veterinary technicians in specialty teaching hospitals: a multicenter cross-sectional study. *Journal of Veterinary Emergency and Critical Care*, *30*(1), 18-27. https://doi.org/10.1111/vec.12916

Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication monographs*, *76*(4), 408-420. https://doi.org/10.1080/03637750903310360

Hegney, D., S. Francis, K., & Drury, V. (2014). Compassion satisfaction, compassion fatigue, anxiety, depression, and stress in registered nurses in Australia: Study 1 results. *Journal of Nursing Management*, *22*(4), 506-518. https://doi.org/10.1111/jonm.12160

Hewson, C. (2014). Grief for pets–Part 2: Avoiding compassion fatigue. *Veterinary Nursing Journal*, *29*(12), 388-391. https://doi.org/10.1111/vnj.12199

Hill, E. M., LaLonde, C. M., & Reese, L. A. (2020). Compassion fatigue in animal care workers. *Traumatology*, *26*(1), 96. https://doi.org/10.1037/trm0000218

Ho, J., Hussain, S., & Sparagano, O. (2021). Did the COVID-19 pandemic spark a public interest in pet adoption?. *Frontiers in Veterinary Science*, 444. https://doi.org/10.3389/fvets.2021.647308

Hooper, C., Craig, J., Janvrin, D. R., Wetsel, M. A., & Reimels, E. (2010). Compassion satisfaction, burnout, and compassion fatigue among emergency nurses compared with nurses in other selected inpatient specialties. *Journal of Emergency Nursing*, 36(5), 420–427. https://doi.org/10.1016/j.jen.2009.11.027

Huggard, P., & Unit, G. (2013). A systematic review of the measurement of compassion fatigue, vicarious trauma, and secondary traumatic stress in physicians. *Australasian Journal of Disaster and Trauma Studies*, *1*.

Hunsaker, S., Chen, H. C., Maughan, D., & Heaston, S. (2015). Factors that influence the development of compassion fatigue, burnout, and compassion satisfaction in emergency department nurses. *Journal of nursing scholarship*, *47*(2), 186-194. https://doi.org/10.1111/jnu.12122

Ilic-Godfrey, S. (2019) 'Ahead of the pack: why are veterinary occupations growing much faster than average?' *Beyond the Numbers: Employment & Unemployment*, 8 (4) (U.S. Bureau of Labor Statistics).

Jack, S.P., Petrosky, E., Lyons, B.H. (2018). Surveillance for violent deaths—National Violent Death Reporting System, 27 states, 2015. *MMWR Surveillance Summary* 67. 1–32. https://doi.org/10.15585/mmwr.ss6711a1

Jacobson, J. M. (2013). Compassion fatigue, compassion satisfaction, and burnout: Reactions among employee assistance professionals providing workplace crisis intervention and disaster management services. In *Workplace Disaster Preparedness, Response, and Management* (pp. 133-152). Routledge.

Jarrad, R. A., & Hammad, S. (2020). Oncology nurses' compassion fatigue, burn out and compassion satisfaction. *Annals of General Psychiatry*, 19(1), 1–8. https://doi.org/10.1186/s12991-020-00272-9

Jaworski, J. L., Thompson, L. A., & Weng, H. Y. (2022). Quality of life of veterinary residents in AVMA-Recognized Veterinary Specialty Organizations using the WHOQOL-BREF instrument. *Plos one*, *17*(5). https://doi.org/10.1371/journal.pone.0268343

Jo, M., Na, H., & Jung, Y. E. (2020). Mediation effects of compassion satisfaction and compassion fatigue in the relationships between resilience and anxiety or depression among hospice volunteers. *Journal of Hospice & Palliative Nursing*, *22*(3), 246-253. https://doi.org/10.1097/NJH.0000000000000640

Joinson, C. (1992). Coping with compassion fatigue. *Nursing*, *22*(4), 116-118. https://doi.org/10.1097/00152193-199204000-00035

Kalin, N. H. (2020). The critical relationship between anxiety and depression. *American Journal of Psychiatry*, *177*(5), 365-367. https://doi.org/10.1176/appi.ajp.2020.20030305

Karaffa, K. M., & Hancock, T. S. (2019). Mental health experiences and service use among veterinary medical students. *Journal of veterinary medical education*, *46*(4), 449-458. https://doi.org/10.3138/jvme.1017-145r1

Kassam-Adams, N. (1995). *The risks of treating sexual trauma: Stress and secondary trauma in psychotherapists*. University of Virginia.

Kim, K. Y., Eisenberger, R., & Baik, K. (2016). Perceived organizational support and affective

organizational commitment: Moderating influence of perceived organizational

competence. *Journal of Organizational Behavior*, *37*(4), 558-

583. https://doi.org/10.1002/job.2081

Kimber, S., & Gardner, D. H. (2016). Relationships between workplace well-being, job demands

and resources in a sample of veterinary nurses in New Zealand. *New Zealand veterinary

journal*, *64*(4), 224-229. https://doi.org/10.1080/00480169.2016.1164092

Knesl, O., Hart, B. L., Fine, A. H., Cooper, L., Patterson-Kane, E., Houlihan, K. E., & Anthony,

R. (2017). veterinarians and Humane endings: When is it the right time to euthanize a

companion Animal?. *Frontiers in veterinary science*, *4*, 45.

https://doi.org/10.3389/fvets.2017.00045

Koinis, A., Giannou, V., Drantaki, V., Angelaina, S., Stratou, E., & Saridi, M. (2015). The

impact of healthcare workers job environment on their mental-emotional health. Coping

strategies: the case of a local general hospital. *Health psychology research*, *3*(1).

https://doi.org/10.4081/hpr.2015.1984

Kogan, L. R., Wallace, J. E., Schoenfeld-Tacher, R., Hellyer, P. W., & Richards, M. (2020).

Veterinary technicians and Occupational burnout. *Frontiers in Veterinary Science*, *7*, 328.

https://doi.org/10.3389/fvets.2020.00328

Koutsimani, P., Montgomery, A., & Georganta, K. (2019). The relationship between burnout,

depression, and anxiety: A systematic review and meta-analysis. *Frontiers in psychology*,

284. https://doi.org/10.3389/fpsyg.2019.00284

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9. *Journal of General Internal

Medicine*, *16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Leary, M. R., Tate, E. B., Adams, C. E., Batts Allen, A., & Hancock, J. (2007). Self-compassion

and reactions to unpleasant self-relevant events: the implications of treating oneself

kindly. *Journal of personality and social psychology*, *92*(5), 887.

https://doi.org/10.1037/0022-3514.92.5.887

Lederer, W., Kinzl, J. F., Traweger, C., Dosch, J., & Sumann, G. (2008). Fully developed

burnout and burnout risk in intensive care personnel at a university hospital. *Anaesthesia*

and intensive care, *36*(2), 208-213. https://doi.org/10.1177/0310057X0803600211

Lee, J. J., Gottfried, R., & Bride, B. E. (2018). Exposure to client trauma, secondary traumatic

stress, and the health of clinical social workers: A mediation analysis. *Clinical Social*

Work Journal, *46*(3), 228-235. https://doi.org/10.1007/s10615-017-0638-1

Leiter, M.P., & Spence Laschinger, H.K. (2006). Relationships of work and practice

environment to professional burnout: Testing a causal model. *Nursing Research*, 55, 137–

146. https://doi.org/10.1097/00006199-200603000- 00009

Leiter, M. P., & Maslach, C. (1988). The impact of interpersonal environment on burnout and

organizational commitment. *Journal of Organizational Behavior*, 9, 297–308.

https://doi.org/dx.doi.org/10.1002/job.4030090402

Leiter, M. P., & Maslach, C. (2009). Nurse turnover: The mediating role of burnout. Journal of

Nursing Management, 17, 331–339. http://dx.doi.org/10.1111/j.1365-

2834.2009.01004.x

Liss, D. J., Kerl, M. E., & Tsai, C. L. (2020). Factors associated with job satisfaction and

engagement among credentialed small animal veterinary technicians in the United

States. *Journal of the American Veterinary Medical Association*, *257*(5), 537-

545. https://doi.org/10.2460/javma.257.5.537

Lloyd, C., & Campion, D. P. (2017). Occupational stress and the importance of self-care and

    resilience: focus on veterinary nursing. *Irish veterinary journal*, 70, 30.

    https://doi.org/10.1186/s13620-017-0108-7

Lovell, B. L., & Lee, R. T. (2013). Burnout and health promotion in veterinary medicine. The

    Canadian veterinary journal. 54(8), 790–791. https://doi.org/10.1037/trm0000096

Ludick, M., & Figley, C. R. (2017). Toward a mechanism for secondary trauma induction and

    reduction: Reimagining a theory of secondary traumatic stress. *Traumatology*, *23*(1), 112.

MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect

    effect: Distribution of the product and resampling methods. Multivariate Behavioral

    Research, 39(1), 99. https://doi.org/10.1207/s15327906mbr3901_4

Maharaj, S., Lees, T., & Lal, S. (2019). Prevalence and risk factors of depression, anxiety, and

    stress in a cohort of Australian nurses. *International journal of environmental research*

    and public health, *16*(1), 61. https://doi.org/10.3390/ijerph16010061

Maher-Brisen, P. (2007). Addiction: An Occupational Hazard in Nursing. *American Journal of*

    Nursing 107 (8): 78-79. https://doi.org/10.1097/01.NAJ.0000282302.49183.67

Martin-Cuellar, A., Lardier Jr, D. T., & Atencio, D. J. (2021). Therapist mindfulness and

    subjective vitality: The role of psychological wellbeing and compassion

    satisfaction. *Journal of Mental Health*, *30*(1), 113-120.

    https://doi.org/10.1080/09638237.2019.1644491

Marton, B., Kilbane, T., & Nelson-Becker, H. (2020). Exploring the loss and disenfranchised

    grief of animal care workers. *Death Studies*, *44*(1), 31-41.

    https://doi.org/10.1080/07481187.2018.1519610

Maruyama, G., & Ryan, C. S. (2014). *Research methods in social relations* (8th ed.). Wiley

   Blackwell.

Maske, U. E., Riedel-Heller, S. G., Seiffert, I., Jacobi, F., & Hapke, U. (2014). Prevalence and

   comorbidity of self-reported diagnosis of burnout syndrome in the general

   population. *Psychiatrische Praxis*, *43*(1), 18-24. https://doi.org/10.1055/s-0034-1387201

Maslach, C. (2003). *Burnout: The cost of caring*. Cambridge.

Meadors, P., Lamson, A., Swanson, M., White, M., & Sira, N. (2010). Secondary traumatization

   in pediatric healthcare providers: Compassion fatigue, burnout, and secondary traumatic

   stress. *OMEGA-Journal of Death and Dying*, *60*(2), 103-

   128. https://doi.org/10.2190/OM.60.2.a

Mathieu, F. (2007). Running on empty: Compassion fatigue in health professionals. *Rehab &

   Community Care Medicine*, *4*, 1-7.

McArthur, M. L., Clise, M. H., & Matthew, S. M. (2021). Sources of pleasure in veterinary

   work: A qualitative study. *Veterinary Record*, *188*(11).

McArthur, M. L., Andrews, J. R., Brand, C., & Hazel, S. J. (2017). The Prevalence of

   Compassion Fatigue among Veterinary Students in Australia and the Associated

   Psychological Factors. *Journal of Veterinary Medical Education,* 44(1), 9–21.

   https://doi.org/10.3138/jvme.0116-016r3

McHolm, F. (2006). Rx for compassion. *Journal of Christian Nursing*, 23(4), 12– 19.

   https://doi.org/10.1097/00005217-200611000-00003

Midway, S., Robertson, M., Flinn, S., & Kaller, M. (2020). Comparing multiple comparisons:

   practical guidance for choosing the best multiple comparisons test. *PeerJ*, *8*.

   https://doi.org/10.7717/peerj.10387ha

Monaghan, H., Rohlf, V., Scotney, R., & Bennett, P. (2020). Compassion fatigue in people who care for animals: An investigation of risk and protective factors. *Traumatology*. https://doi.org/10.1037/trm0000246

Neff, K.D. (2003). The development and validation of a scale to measure self-compassion. *Self and Identity*, *2*(3), 223–250. https://doi.org/10.1080/15298860309027

Neill, C. L., Hansen, C. R., & Salois, M. (2022). The Economic Cost of Burnout in Veterinary Medicine. *Frontiers in Veterinary Science*, *9*. https://doi.org/10.3389/fvets.2022.814104

Nett RJ, Witte TK, Holzbauer SM, et al. (2015). Risk factors for suicide, attitudes toward mental illness, and practice-related stressors among US veterinarians. *J Am Vet Med Assoc*, 247, 945–955. https://doi.org/10.2460/javma.247.8.945

Nevarez, M. D., Yee, H. M., & Waldinger, R. J. (2017). Friendship in war: Camaraderie and prevention of posttraumatic stress disorder prevention. *Journal of traumatic stress*, *30*(5), 512-520. https://doi.org/10.1002/jts.22224

O'Brien, C., Dhálaigh, D. N., Corcoran, P., & Dodd, P. (2021). Mental Health of Veterinary Professionals in Ireland.

Osborne, J. W., & Waters, E. (2002). Four assumptions of multiple regression that researchers should always test. *Practical assessment, research, and evaluation*, *8*(1), 2.

Orrù, G., Marzetti, F., Conversano, C., Vagheggini, G., Miccoli, M., Ciacchini, R., ... & Gemignani, A. (2021). Secondary traumatic stress and burnout in healthcare workers during COVID-19 outbreak. *International journal of environmental research and public health*, *18*(1), 337. https://doi.org/10.3390/ijerph18010337

Ouedraogo, F. B., Lefebvre, S. L., Hansen, C. R., & Brorsen, B. W. (2021). Compassion satisfaction, burnout, and secondary traumatic stress among full-time veterinarians in the

United States (2016–2018). *Journal of the American Veterinary Medical Association*, *258*(11), 1259-1270. https://doi.org/10.2460/javma.258.11.1259

Overfield, R. (2012). Creative tools for managing compassion fatigue and stress. In *Proceedings of the annual conference of the New Zealand Veterinary Nursing Assoc. New Zealand Veterinary Nursing Association, Hamilton, New Zealand*. pp. 19-22.

Pedhazur, E. J., & Pedhazur Schmelkin, L. (1991). Exploratory factor analysis. *Measurement, design, and analysis: An integrated approach*, *590*, 630.

Pehlivan, T., & Güner, P. (2018). Compassion fatigue: The known and unknown. *Journal of Psychiatric Nursing*, 9(2), 129–134.

Perret, J. L., Best, C. O., Coe, J. B., Greer, A. L., Khosa, D. K., & Jones-Bitton, A. (2020a). Prevalence of mental health outcomes among Canadian veterinarians. *Journal of the American Veterinary Medical Association*, *256*(3), 365-375. https://doi.org/10.2460/javma.256.3.365

Perret, J. L., Best, C. O., Coe, J. B., Greer, A. L., Khosa, D. K., & Jones-Bitton, A. (2020b). The Complex Relationship Between Veterinarian Mental Health and Client Satisfaction. *Frontiers in Veterinary Science, 7*. https://doi.org/10.3389/fvets.2020.000922

Perret, J. L., Best, C. O., Coe, J. B., Greer, A. L., Khosa, D. K., & Jones-Bitton, A. (2020c). Association of demographic, career, and lifestyle factors with resilience and association of resilience with mental health outcomes in veterinarians in Canada. *Journal of the American Veterinary Medical Association*, *257*(10), 1057-1068. https://doi.org/10.2460/javma.2020.257.10.1057

Perz, C. A., Lang, B. A., & Harrington, R. (2020). Validation of the Fear of COVID-19 Scale in a US College Sample. *International journal of mental health and addiction*, 1-11. https://doi.org/10.1007/s11469-020-00356-3

Platt, B., Hawton, K., Simkin, S., Dean, R., & Mellanby, R. J. (2012). Suicidality in the veterinary profession: Interview study of veterinarians with a history of suicidal ideation or behavior. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, 33(5), 280–289. https://doi.org/10.1027/0227-5910/a000143

Poncet, M.C., Toullic, P., Papazian, L., Kentish-Barnes, N., Timsit, J., Pochard, F., ... Azoulay, É. (2007). Burnout syn- drome in critical care nursing staff. American Journal of Respiratory & Critical Care Medicine, 175, 698–704. https://doi.org/10.1164/rccm.200606-806OC

Portnoy, D. (2011). Burnout and compassion fatigue: watch for the signs. *Health Progress*, 92(4), 46-50.

Potter, P., Deshields, T., Divanbeigi, J., Berger, J., Cipriano, D., Norris, L., & Olsen, S. (2010). Compassion Fatigue and Burnout. *Clinical Journal of Oncology Nursing*, 14(5). https://doi.org/10.1188/10.cjon.e56-e62

Quain, A., Mullan, S., & Ward, M. P. (2021). Risk factors associated with increased ethically challenging situations encountered by veterinary team members during the COVID-19 Pandemic. *Frontiers in veterinary science*, *8*. https://doi.org/10.3389/fvets.2021.752388

Quinn, A., Ji, P., & Nackerud, L. (2019). Predictors of secondary traumatic stress among social workers: Supervision, income, and caseload size. *Journal of Social Work*, *19*(4), 504-528. https://doi.org/10.1177/1468017318762450

Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the self-compassion scale. *Clinical psychology & psychotherapy*, *18*(3), 250-255. https://doi.org/10.1002/cpp.702

Rajaretnam, T. (2015). *Statistics for social sciences*. SAGE Publishing.

Randall, M. S., Moody, C. M., & Turner, P. V. (2021). Mental wellbeing in laboratory animal professionals: a cross-sectional study of compassion fatigue, contributing factors, and coping mechanisms. *Journal of the American Association for Laboratory Animal Science*, *60*(1), 54-63. https://doi.org/10.30802/AALAS-JAALAS-20-000039

Reeve, C. L., Rogelberg, S. G., Spitzmuller, C., & Digiacomo, N. (2005). The caring-killing paradox: Euthanasia-related strain among animal- shelter workers. *Journal of Applied Social Psychology, 35,* 119–143. https://doi.org/10.1111/j.1559-1816.2005.tb02096.x

Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: a review of the literature. *Journal of applied psychology*, *87*(4), 698. https://doi.org/10.1037/0021-9010.87.4.698

Ringle, C., Da Silva, D., & Bido, D. (2015). Structural equation modeling with the SmartPLS. *Brazilian journal of marketing*, *13*(2). https://doi.org/10.5585/remark.v13i2.2717

Ringle, C. M., Sarstedt, M., Mitchell, R., & Gudergan, S. P. (2018). Partial least squares structural equation modeling in HRM research. *The International Journal of Human Resource Management*, 1–27. https://doi.org/10.1080/09585192.2017.1416655

Robinson, D., Edwards, M., Mason, B., Cockett, J., Graham, K. A., & Martin, A. (2019). The 2019 survey of the veterinary profession. *Brighton, UK: Institute for Employment Studies*.

Rodríguez-Rey R, Palacios A, Alonso-Tapia J, et al. Burnout and post-traumatic stress in

    paediatric critical care personnel: prediction from resilience and coping styles. Aust Crit

    Care. 2019;32(1):46-53.9. https://doi.org/10.1016/j.aucc.2018.02.003

Rohlf, V. I. (2018). Interventions for occupational stress and compassion fatigue in animal care

    professionals—A systematic review. *Traumatology*, *24*(3),

    186. https://doi.org/10.1037/trm0000144

Routh, J., Paramasivam, S. J., Cockcroft, P., Nadarajah, V. D., & Jeevaratnam, K. (2021).

    Veterinary education during COVID-19 and beyond—challenges and mitigating

    approaches. *Animals*, *11*(6), 1818. https://doi.org/10.3390/ani11061818

Rudenstine, S., McNeal, K., Schulder, T., Ettman, C. K., Hernandez, M., Gvozdieva, K., &

    Galea, S. (2021). Depression and anxiety during the COVID-19 pandemic in an urban,

    low-income public university sample. *Journal of Traumatic Stress*, *34*(1), 12-22.

    https://doi.org/10.1002/jts.22600

Ruiz, P. P. (2019). Current trends in veterinary medicine: A closer look at large-group

    consolidation.

Ruiz-Fernández, M. D., Pérez-García, E., & Ortega-Galán, Á. M. (2020). Quality of life in

    nursing professionals: Burnout, fatigue, and compassion satisfaction. *International Journal*

    of Environmental Research and Public Health, *17*(4), 1253.

    https://doi.org/10.3390/ijerph17041253

Ryu, I. S., & Shim, J. (2021). The Influence of Burnout on Patient Safety Management Activities

    of Shift Nurses: The Mediating Effect of Compassion Satisfaction. *International Journal*

    of Environmental Research and Public Health, *18*(22).

    https://doi.org/10.3390/ijerph182212210

Sacco, T. L., Ciurzynski, S. M., Harvey, M. E., & Ingersoll, G. L. (2015). Compassion

  satisfaction and compassion fatigue among critical care nurses. *Critical care nurse*, *35*(4),

  32-42. https://doi.org/10.4037/ccn2015392

Schaufeli, W.B., & Greenglass, E.R. (2001). Introduction to special issue on burn- out and

  health. Psychology & Health, 16, 501–510. doi:10.1080/0887044010 8405523

Schwartz, S. P., Adair, K. C., Bae, J., Rehder, K. J., Shanafelt, T. D., Profit, J., & Sexton, J. B.

  (2019). Work-life balance behaviours cluster in work settings and relate to burnout and

  safety culture: a cross-sectional survey analysis. *BMJ Quality & Safety*, *28*(2), 142-150.

  https://doi.org/10.1136/bmjqs-2018-007933

Scotney, R. L., Mclaughlin, D., & Keates, H. L. (2015). A systematic review of the effects of

  euthanasia and occupational stress in personnel working with animals in animal shelters,

  veterinary clinics, and biomedical research facilities. *Journal of the American Veterinary

  Medical Association, 247*(10), 1121-1130. https://doi.org/10.2460/javma.247.10.1121

Serrano, J., Hassamal, S., Hassamal, S., Dong, F., & Neeki, M. (2021). Depression and anxiety

  prevalence in nursing staff during the COVID-19 pandemic. *Nursing Management*, *52*(6),

  24. https://doi.org/10.1097/01.NUMA.0000752784.86469.b9

Shanafelt, T. D. (2010). Enhancing Meaning in Work. *JAMA*, *302(12)*, 1338.

  https://doi.org/10.1001/jama.2009.1385

Shoji, K., Lesnierowska, M., Smoktunowicz, E., Bock, J., Luszczynska, A., Benight, C. C., &

  Cieslak, R. (2015). What comes first, job burnout or secondary traumatic stress? Findings

  from two longitudinal studies from the US and Poland. *PloS one*, *10*(8).

  https://doi.org/10.1371/journal.pone.0136730

Skipper, G. E., & Williams, J. B. (2012). Failure to acknowledge high suicide risk among

    veterinarians. *Journal of Veterinary Medical Education*, 39(1), 79-82.

    https://doi.org/10.3138/jvme.0311.034R

Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing

    generalized anxiety disorder. *Archives of Internal Medicine*, *166*(10), 1092.

    https://doi.org/10.1001/archinte.166.10.1092

Stamm, B. H. (2002). Measuring compassion satisfaction as well as fatigue: Developmental

    history of the compassion satisfaction and fatigue test, In C. R. Figley (Ed.), Treating

    compassion fatigue, Brunner-Routledge: New York, pp. 107–119.

Stamm, B. H. (2005). Professional Quality of Life: Compassion Satisfaction and Fatigue

    Subscales, R –1V (ProQOL). http://www.isu.edu/bhstamm.

Stamm, B. (2010). The ProQOL manual. 2nd Ed. Retrieved from

    http://compassionfatigue.org/pages/ProQOLManualOct10.pdf

Storlie, F.J. (1979). Burnout: The elaboration of a concept. *American Journal of Nursing*, 79,

    2108–2111. https://doi.org/10.2307/3469867

Tabachnick, B. G., & Fidell, L. S. (2019). Using multivariate statistics (7th ed.). Pearson

    Education.

Thompson-Hughes, J. (2019). Burnout and compassion fatigue within veterinary nursing: a

    literature review. *Veterinary Nursing Journal*, 34(10), 266–

    268. https://doi.org/10.1080/17415349.2019.1646620

Tran, L., Crane, M. F., & Phillips, J. K. (2014). The distinct role of performing euthanasia on

    depression and suicide in veterinarians. *Journal of occupational health*

    psychology, *19*(2), 123. https://doi.org/10.1037/a0035837

Tremblay, M. A., & Messervey, D. (2011). The Job Demands-Resources model: Further

    evidence for the buffering effect of personal resources. *SA Journal of Industrial*

    Psychology, 37(2), 10. https://doi.org/10.4102/sajip.v37i2.876.

Todaro-Franceschi, P. R. F. (2013). Compassion Fatigue and Burnout in Nursing: Enhancing

    Professional Quality of Life. Springer Publishing Company.

Tomasi, S. E., Fechter-Leggett, E. D., Edwards, N. T., Reddish, A. D., Crosby, A. E., & Nett, R.

    J. (2019). Suicide among veterinarians in the United States from 1979 through

    2015. *Journal of the American Veterinary Medical Association*, *254*(1), 104-112.

    https://doi.org/10.2460/javma.254.1.104

Tukey, J. W. (1949). Comparing individual means in the analysis of variance. *Biometrics*, 99-

    114. https://doi.org/10.2307/3001913

Walker, L.O., Avant, K.C., Concept analysis. Strategies for theory construction in nursing. 5th

    ed. Prentice-Hall; 2011. p. 157–179.

West, C. P., Huschka, M. M., Novotny, P. J., Sloan, J. A., Kolars, J. C., Habermann, T. M., &

    Shanafelt, T. D. (2006). Association of perceived medical errors with resident distress and

    empathy. *JAMA*, 296(9), 1071. https://doi.org/10.1001/jama.296.9.1071

Williams, J., & MacKinnon, D. P. (2008). Resampling and distribution of the product methods

    for testing indirect effects in complex models. *Structural Equation Modeling: A*

    Multidisciplinary Journal, 15(1), 23–51. https://doi.org/10.1080/10705510701758166

Witte, T. K., Spitzer, E. G., Edwards, N., Fowler, K. A., & Nett, R. J. (2019). Suicides and

    deaths of undetermined intent among veterinary professionals from 2003 through 2014.

    Journal of the American Veterinary Medical Association, 255(5), 595–608.

    https://doi.org/10.2460/javma.255.5.595.

Wozniak, H., Benzakour, L., Moullec, G., Buetti, N., Nguyen, A., Corbaz, S., ... & Cereghetti, S. (2021). Mental health outcomes of ICU and non-ICU healthcare workers during the COVID-19 outbreak: a cross-sectional study. *Annals of Intensive Care*, *11*(1), 1-10. https://doi.org/10.1186/s13613-021-00900-x

Yıldırım, N., Coşkun, H., & Polat, Ş. (2021). The Relationship Between Psychological Capital and the Occupational Psychologic Risks of Nurses: The Mediation Role of Compassion Satisfaction. *Journal of Nursing Scholarship*, *53*(1), 115-125. https://doi.org/10.1111/jnu.12607

Yip, S. Y., Mak, W. W., Chio, F. H., & Law, R. W. (2017). The mediating role of self-compassion between mindfulness and compassion fatigue among therapists in Hong Kong. *Mindfulness*, *8*(2), 460-470. https://doi.org/10.1007/s12671-016-0618-5

Zeidner, M., Hadar, D., Matthews, G., & Roberts, R. D. (2013). Personal factors related to compassion fatigue in health professionals. Anxiety, Stress, and Coping, 26(6), 595–609.

APPENDICES

Appendix A

Survey Instrument and Informed Consent

This appendix contains the informed consent and survey instrument used in this study,

with additional insights provided for the reader in bolded text.

HOOD COLLEGE
INFORMED CONSENT FORM

Compassion Fatigue, Anxiety, and Depression Among Veterinary Nurses
"Let's Change Veterinary Medicine, For Good!"

INTRODUCTION
You are invited to be a participant in a research study about the effects of compassion fatigue, mental illness, and compassion satisfaction of veterinary nurses. You were selected as a possible participant because you have identified yourself as a veterinary nurse. We ask that you read this document and ask any questions you may have before agreeing to be in the study. We require that participants in this study be at least 18 years old. The study is being conducted by Hood College.

BACKGROUND AND PURPOSE OF THE STUDY
The purpose of this study is to explore the role of compassion satisfaction in the relationship between compassion fatigue and mental illness among veterinary nurses.

DURATION
The length of time you will be involved with this study is approximately 10-15 minutes.

PROCEDURES
If you agree to be in this study, you will be asked to do the following things: respond to statements on a scale of 1-5 or 1-4 by your level of agreement with them, as well as disclose specific demographic information.

RISKS/BENEFITS
This study has the following risks: potential for triggering memories of previous traumatic experiences.

The benefit of participation: contributing to the knowledge and development to improve the lives of veterinary nurses.

CONFIDENTIALITY
The records of this study will be kept private on a password protected computer and program. In

any sort of report that is published or presentation that is given, we will not include any information that will make it possible to identify a participant.

VOLUNTARY NATURE OF THE STUDY
Your participation in this study is completely voluntary. Your decision whether or not to participate will not affect your current or future relations with Hood College or any of its representatives. If you decide to participate in this study, you are free to withdraw from the study at any time without affecting those relationships. You may withdraw from the study at any time simply by closing your browser window. Your responses up until the exit point will be saved and therefore will be included in study results.

CONTACTS AND QUESTIONS
The researcher conducting this study is Carrie Johnson. If you have questions, you may contact the researcher at ced14@hood.edu.

If you have questions or concerns regarding this study and would like to speak with someone other than the researcher(s), you may contact Dr. Jolene Sanders, Institutional Review Board Chair, Hood College, 401 Rosemont Ave., Frederick, MD 21701, sandersj@hood.edu.

COMPENSATION: Not applicable

STATEMENT OF CONSENT

The procedures of this study have been explained to me and my questions have been addressed. The information that I provide is confidential and will be used for research purposes only. I am at least eighteen years old. I understand that my participation is voluntary and that I may withdraw anytime without penalty. If I have any concerns about my experience in this study (e.g., that I was treated unfairly or felt unnecessarily threatened), I may contact the Chair of the Institutional Review Board or the Chair of the sponsoring department of this research regarding my concerns.
Pressing "NEXT" and moving forward with the survey indicates informed consent.
Thank you for your valued contribution to improving our field.

Section 1

Please answer the following questions to the best of your ability. There are 8 sections to this questionnaire, and it should take approximately 10-15 minutes to complete. Participation in this survey indicates informed consent.

Consider the following questions about you and your current work situation. Select the option that honestly reflects how frequently you experienced these things over the past month. There are no right or wrong answers. Do not spend too much time on any statement.

This instrument measures compassion fatigue and compassion satisfaction, as conceptualized by Stamm (2010).

1	2	3	4	5
Never	Rarely	Sometimes	Often	Very Often

1. I am happy
2. I am preoccupied with more than one [patient] I help
3. I get satisfaction from being able to help [patients]
4. I feel connected to others
5. I jump or am startled by unexpected sounds
6. I feel invigorated after working with [patients] I help
7. I find it difficult to separate my personal life from my life as a [veterinary worker]
8. I am not as productive at work because I am losing sleep over traumatic experiences of a [patient/client] I help
9. I think that I might have been affected by the traumatic stress of the [patients] I help
10. I feel trapped by my job as a [veterinary worker]
11. Because of my role as a [veterinary worker], I have felt "on edge" about various things
12. I like my work as a [veterinary worker]
13. I feel depressed because of the traumatic experiences of the [patients] I help
14. I feel as though I am experiencing some of the trauma of [a patient] I have helped
15. I have beliefs that sustain me
16. I am pleased with how I can keep up with [nursing] techniques and protocols
17. I am the person I have always wanted to be
18. My work makes me feel satisfied
19. I feel worn out because of my work as a [veterinary worker]
20. I have happy thoughts and feelings about the [patients] I help and how I could help them
21. I feel overwhelmed because my [caseload] seems endless
22. I believe I can make a difference through my work
23. I avoid certain activities or situations because they remind me of frightening experiences of the [patients/clients] I help
24. I am proud of what I can do to provide [care]
25. As a result of my work, I have intrusive, frightening thoughts
26. I feel "bogged down" by the system

27. I have thoughts that I am a "success" as a [veterinary worker]
28. I cannot recall important parts of my work with trauma victims
29. I am a very caring person
30. I am happy that I chose to do this work

Section 2

Please answer the following questions.

This instrument measures anxiety as conceptualized by Spitzer et al (2006) using symptoms as defined in the Diagnostic and Statistical Manual for Mental Disorders (5th ed., 2017).

Consider each of the following questions. Select the number that honestly reflects how frequently you experienced these things over the past TWO WEEKS. There are no right or wrong answers. Do not spend too much time on any statement.

0	1	2	3
Not at all	Several days	More than half the days	Nearly every day

31. Feeling nervous, anxious, or on edge
32. Not being able to stop or control worrying
33. Worrying too much about different things
34. Trouble relaxing
35. Being so restless that it is hard to sit still
36. Becoming easily annoyed or irritable
37. Feeling afraid as if something might happen

If you have experienced some or all of the above in the past 2 weeks, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not at all difficult	Somewhat difficult	Very difficult	Extremely difficult

Section 3

This instrument measures depression as conceptualized by Spitzer et al (2006) using symptoms as defined in the Diagnostic and Statistical Manual for Mental Disorders (5th ed., 2017).

Consider each of the following questions. Select the number that honestly reflects how frequently you experienced these things over the past TWO WEEKS. There are no right or wrong answers. Do not spend too much time on any statement.

0	1	2	3
Not at all	Several days	More than half the days	Nearly every day

38. Little interest or pleasure in doing things
39. Feeling down, depressed, or hopeless
40. Trouble falling or staying asleep, or sleeping too much
41. Feeling tired or having little energy
42. Poor appetite or overeating
43. Feeling bad about yourself- or that you are a failure or have let yourself or your family down
44. Trouble concentrating on things, such as reading the newspaper or watching television
45. Moving or speaking so slowly that other people have noticed? Or the opposite- being so fidgety or restless that you have been moving around a lot more than normal
46. Thoughts that you would be better off dead or of hurting yourself in some way

If you have experienced some or all of the above in the past 2 weeks, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

0	1	2	3
Not at all difficult	Somewhat difficult	Very difficult	Extremely difficult

Section 4

Please answer the following questions.
This section measures basic demographic information and specific work circumstances

47. **Please specify your age range:**
- 18 to 25 years old
- 26 to 30 years old
- 31 to 35 years old
- 36 to 40 years old
- 41 to 45 years old
- 46 to 50 years old
- 51 to 55 years old
- Greater than 55 years old

48. **Gender (select all that apply)**
- Woman
- Man
- Non-binary
- Prefer not to say
- Prefer to self-describe (text box provided)

49. **Which of the following best describes you?**
- White or Caucasian
- Hispanic, Latino, or Spanish
- Black or African American
- American Indian or Alaska Native
- Asian
- Middle Eastern or North African
- Native Hawaiian or other Pacific Islander
- Multiracial or Biracial
- Other (text box provided)

50. **Please select the annual income range for your household**
- Under $20,000
- $20,001-35,000
- 35,001-50,000
- $50,001-$65,000
- $65,001- $80,000
- $80,001-90,000
- $90,001-100,000
- Greater than 100,000

51. **What US region do you currently reside in?**
- Northeast
- Mid-Atlantic
- Southeast

- Midwest
- West
- Pacific Northwest

52. **Please select your marital status:**
- Single
- Married
- Cohabitating with partner
- Widowed
- Divorced
- Separated

53. **What is the highest degree or level of school have you completed? If currently enrolled, highest degree earned.**
- Some high school, no diploma
- High school graduate, diploma, or the equivalent (for example: GED)
- Some college credit, no degree
- Trade/technical/vocational training
- Associate degree
- Bachelor's degree
- Master's degree
- Professional degree
- Doctorate degree

54. **How long have you worked in the veterinary field?**
- Less than 1 year
- 1 to 2 years
- 2 to 4 years
- 4 to 6 years
- 6 to 8 years
- 8 to 10 years
- 10 to 12 years
- More than 12 years

55. **Which best describes your employment status?**
- Full-time
- Part time
- Relief/As needed (PRN)
- Volunteer
- Other (text box provided)

56. **Which best describes your current position within the veterinary field?**
- Kennel assistant
- Technician assistant
- Technician (unlicensed)
- Credentialed technician

- Credentialed technician with VTS (text box provided)
- Client Care Representative/Receptionist
- Other (Shelter worker, etc.) (Text box provided)

57. **How long have you worked in your current position**?
- Less than 6 months
- 6 months to 1 year
- 1 year to 3 years
- 3 years to 5 years
- 6 years to 8 years
- 8 years to 10 years
- Greater than 10 years

58. **What category best describes the type of hospital are you employed by?**
- General Practice
- Urgent Care
- Emergency Room
- Specialty Center
- Emergency & Specialty Center
- Other, please specify: (text box provided)

59. **How would you classify your current geographic working area?**
- Suburban
- Urban
- Rural

60. **On average, how many shifts do you work per week**?
- 0 to 1
- 2 to 3
- 3 to 4
- 5 to 6
- Greater than 6

61. **What time of day are your shifts scheduled?**
- Dayshift (between 8a-8p)
- Mid-shift (between 4p-4a or 6p-6a)
- Nightshift (after 8p)
- It varies (combination of day/night or mid-shifts)

62. **On average, how many patients are euthanized or pass away on each shift you work? (Provide an estimate)**
- 0 to 1
- 1 to 2
- 3 to 4
- 4 to 5
- 5 or more

63. **Have you currently or previously pursued any mental health support**?
   - Yes
   - No

64. **Have you previously received any mental health or trauma training? (Example: QPR Gatekeeper Certification, Narcan or Overdose training)**
   - Yes
   - No
   - Please provide any details you feel comfortable sharing regarding this training. (Text box provided).

Section 5

This instrument measures Perceived Organizational Support as conceptualized by Eisenberger et al. (1986).

Listed below are statements that represent possible opinions that you may have about working at your current workplace. Please indicate the degree of your agreement or disagreement with each statement by filling in the circle on your answer sheet that best represents your point of view about your current workplace. Please choose from the following answers:

1	2	3	4	5
Strongly Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Strongly Agree

65. The organization values my contribution to its well-being.
66. The organization fails to appreciate any extra effort from me.
67. The organization would ignore any complaint from me.
68. The organization really cares about my well-being.
69. Even if I did the best job possible, the organization would fail to notice.
70. The organization cares about my general satisfaction at work.
71. The organization shows very little concern for me.
72. The organization takes pride in my accomplishments at work.

Section 6

This section contains questions regarding the usage of tobacco, prescription drugs, alcohol, and other substances. Please answer the following questions to the extent you feel comfortable with. If you wish not to disclose, please select "prefer not to disclose".

The following instrument assesses risk factors and usage of Tobacco Alcohol and Prescription Substances (TAPS) as developed by Adam et al. (2019).

73. **In the PAST 12 MONTHS, how often have you used tobacco or any other nicotine delivery product (i.e., e-cigarette, vaping or chewing tobacco)?**
   - Daily or almost daily
   - Weekly
   - Less than Monthly
   - Monthly
   - Never
   - Prefer not to disclose

74. **In the PAST 12 MONTHS, how often have you had 5 or more drinks (men)/4 or more drinks (women) containing alcohol in one day?**
   - Daily or almost daily
   - Weekly
   - Less than Monthly
   - Monthly
   - Never
   - Prefer not to disclose

75. **In the PAST 12 MONTHS, how often have you used any prescription medications just for the feeling, more than prescribed, or that were <u>not</u> prescribed for you (including veterinary medications)?**
   - Daily or almost daily
   - Weekly
   - Less than Monthly
   - Monthly
   - Never
   - Prefer not to disclose

76. **In the PAST 12 MONTHS how often have you recreationally used any drugs including marijuana, cocaine or crack, heroin, methamphetamine (crystal meth), hallucinogens, ecstasy (MDMA), Fentanyl, or Gabapentin?**
   - Daily or almost daily
   - Weekly
   - Less than Monthly
   - Monthly
   - Never
   - Prefer not to disclose

The following questions contain information related to the COVID-19 pandemic. Please indicate the degree of agreement or disagreement with each of the following statements.

Please respond to each item by selecting one of the five (5) responses that reflects how you feel, think or act toward COVID-19.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

77. I am most afraid of COVID
78. It makes me uncomfortable to think about COVID
79. My hands become clammy when I think about COVID
80. I am afraid of losing my life because of COVID
81. When I watch news and stories about COVID on social media, I become nervous or anxious.
82. I cannot sleep because I'm worrying about getting COVID.
83. My heart races or palpitates when I think about getting COVID

Section 8

You have reached the final section!
The following contains questions about how you act in certain circumstances. Please answer to the extent you feel comfortable.

Please read each statement carefully before answering. Indicate how often you behave in the stated manner, using the following scale:

1	2	3	4	5
Almost Never	Rarely	Sometimes	Often	Almost Always

84. When I fail at something important to me, I become consumed by feelings of inadequacy.
85. I try to be understanding and patient towards those aspects of my personality I don't like.
86. When something painful happens, I try to take a balanced view of the situation.
87. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
88. I try to see my failings as part of the human condition.
89. When I'm going through a very hard time, I give myself the caring and tenderness I need.

90. When something upsets me, I try to keep my emotions in balance.
91. When I fail at something that's important to me, I tend to feel alone in my failure
92. When I'm feeling down, I tend to obsess and fixate on everything that's wrong.
93. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
94. I'm disapproving and judgmental about my own flaws and inadequacies.
95. I'm intolerant and impatient towards those aspects of my personality I don't like.

Thank you for your incredibly valued participation in this survey.

We are improving the veterinary community together through your honest responses. We greatly appreciate your willingness to share your experiences with us.

Please refer to the following services for support should you feel negatively impacted by any of the questions asked:

American Veterinary Medical Association, Wellness Resources: avma.org/wellness

National Suicide Prevention Lifeline: 800-273-8255 (call)

Suicidepreventionlifeline.org (live chat feature), Crisis Text Line: Text "HOME" to 741741

Appendix B

Institutional Review Board Application and Authorization

This appendix contains a copy of the Hood College Institutional Review Board research

proposal and application, in addition to a copy of the notice of approval from the Hood College

Institutional Review Board.

Application

Hood College
Institutional Review Board
Research Proposal

1. **Title of Proposal**: The Role of Compassion Satisfaction on the Relationship Between
Compassion Fatigue, Anxiety, and Depression in a Population of Veterinary Nurses

2. **Principal Investigator (PI):** Carrie E. H. Johnson

3. **PI Department:** Hood College Graduate School, Doctorate of Organizational Leadership

4. **PI Contact Information**: Carrie Johnson

> 2413 Windsor Road
> Baltimore, MD 21234
> Cell #: 410-710-5191
> Email: ced14@hood.edu

5. **Faculty Sponsor and Contact Information (if PI is a student):**

Doctoral Committee:

Chair: Nisha Manikoth, Ed.D., Chair
> Assistant Professor of Organizational Leadership
> Director, Doctoral Program in Organizational Leadership
> Hood College
> Email: manikoth@hood.edu

Advisor: David Gurzick, Ph.D.
> Associate Professor of Management
> Department Chair, Business School and Program
> George B. Delaplaine Jr. School of Business
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Advisor: Megan Shaine, Ph.D.
        Assistant Professor of Psychology and Counseling
        Director, Master's in Counseling
        Department of Psychology and Counseling
        Hood College
        Email: shaine@hood.edu

6.   **Other Investigators**: None

7.   **Date of this Submission:** 11/5/2021

8.   **Proposed Duration of the Project**:
      Length of Full Research Study: November 2021-June 2022
      <u>Phase 1</u>: Release of surveys to all platforms
              Social media: November 22, 2021- December 6, 2021
              Professional organization: November 22, 2021- December 6, 2021
              Conference: December 2, 2021-December 16, 2021
      <u>Phase 2</u>: Data Analysis, Write-up & Dissertation Defense
              December 2021-June 2022

9.   **Background Information and Research Questions/Hypotheses**:

      Veterinary nurses invest a large amount of physical and emotional energy in the welfare of patients, often creating lasting impacts of unavoidable trauma (Meadors et al., 2009). These traumatic exposures often lead to the development of occupational psychological hazards such as compassion fatigue. Many individuals affected by compassion fatigue often suffer in silence leading to more serious mental health issues that result in substance abuse and increased suicidality (Figley, 2002, 2006; Meadors et al., 2009; Bartram et al., 2009).

      The emotional, mental, and physical impacts of traumatic experiences on veterinary nurses will ultimately impact business performance for the practice. Some studies have focused on the impact of compassion fatigue on veterinarians (Perret et al., 2020; Scotney et al., 2015; Skipper & Williams, 2012; Budd, 2012; Deacon & Brough, 2017; Nett, 2015). Though veterinary nurses serve as the primary caretaker for animal patients and support systems for veterinarians, patients, and clients, they remain underrepresented in literature and application for organizational interventions (Scotney, et al., 2015).

    A position as a veterinary nurse indicates experiencing not only the physical pain of taking care of their patients, but also the emotional and psychological pain associated with the human

owners. The combined burden of human and animal pain contributes to higher levels of exhaustion, personal relationship conflict, poor well-being, sadness, difficulty sleeping, feelings of guilt and anger (Black et al., 2011).

Key Concepts

Compassion Fatigue

Compassion fatigue is often referred to as cost of caring for others, which results from consistently giving high levels of energy and compassion over an extended period, generally without experiencing positive outcomes. Compassion fatigue can produce cynicism at work, lack of enjoyment, and will eventually cause depression and stress-related illnesses (Figley, 2006; McHolm, 2006; Mathieu, 2007; Potter et al., 2015).

Compassion fatigue, as further conceptualized by Stamm (2010), is known to have two distinct characteristics: burnout and secondary traumatic stress. Stamm (2010) defines compassion fatigue as "the cumulative effects of burnout and secondary traumatic stress, ultimately causing exhaustion, frustration, anger and depression, and a negative feeling driven by dear and work-related trauma" (p. 12)

Burnout

Stamm (2010) defines burnout as one element of the negative effects of caring known as compassion fatigue...burnout is associated with feelings of hopelessness and difficulties in dealing with work or doing your job effectively. These...usually have a gradual onset...They can reflect the feeling that your efforts make no difference, or they can be associated with a very high workload or non-supportive environment" (p. 13).

Secondary Traumatic Stress

Stamm (2010) defines secondary traumatic stress (STS) as an "element of compassion fatigue...about work-related secondary trauma exposure to people who have experienced extremely or traumatically stressful events...negative effects may include fear, sleep disturbances, intrusive images, or avoiding reminders of the person's traumatic experience" (p.13).

Compassion Satisfaction

For this study I will be using compassion satisfaction as conceptualized by Stamm (2010), who defines Compassion Satisfaction as "the pleasure you derive from being able to do your work well...you may feel like it's a pleasure to help others through your work. You may feel positively about your colleagues or your ability to contribute to the work setting or even the greater good of society" (p. 12).

Anxiety and Depression

For this study I will be using qualifications and symptoms as outlined in the Diagnostic and Statistical Manual of Mental Conditions, fifth edition. Anxiety and depression are among the most pervasive and impactful mental illnesses seen among veterinary staff, and generally have a high correlation in occurrence (Wells, et al., 2010). Anxiety is characterized by increased feelings of tension, recurrent intrusive thoughts, and worries, in addition to physical symptoms of tachycardia, dizziness, muscle tension, difficulty concentrating, and sleep disturbances (DSM-5, 2017). Depression is characterized by a depressed mood with loss of interest or pleasure, weight fluctuations, reduced physical movement, feelings of worthlessness, excessive guilt, decreased concentration and decisiveness, and potential for recurrent thoughts of death and suicide with or without a plan (DSM-5, 2017).

Research Design

In this study, I will utilize a non-experimental, cross-sectional design to analyze the relationship between compassion fatigue, anxiety, depression, and the role of compassion satisfaction in this relationship. The study will employ subscales from Stamm's (2010) ProQOL to measure compassion fatigue and compassion satisfaction. The General Anxiety Disorder Scale (GAD-7) (Spitzer & Kroenke, 2006) will be used to measure anxiety and the Patient Health Questionnaire (PHQ-9) (Kroenke & Spitzer, 2002) will be used to measure depression.

Stamm's (2010) compassion fatigue subscale measures two components of compassion fatigue; Burnout and Secondary Traumatic Stress using 10 items each. Stamm's (2010) compassion satisfaction subscale includes 10 items. The PHQ-9 contains nine items, while the GAD-7 contains seven items. In addition, 49 items will be added to address occupational details, and demographic information including age, gender preferences, previous psychological history, perceived work-life balance, and personal perception of current mental state, personal life stress, and stress related to the novel coronavirus pandemic. The self-report survey that will be used for this study will consist of 95 items

The self-reported scores for Compassion fatigue, anxiety, depression, and compassion Satisfaction from each respondent will be summated, averaged and an overall score will be calculated for each respondent. Because the independent and dependent variable are captured on a continuous scale, regression analysis between the variables is appropriate (Maruyama & Ryan, 2014). After assuring data and statistical assumptions are met, regression analysis will be performed. Following this, the potential moderating effects of compassion satisfaction will be determined.

Research Questions:

Research Question 1: What is the relationship of compassion fatigue and mental illness among a population of veterinary nurses?

Research Question 2: How does compassion satisfaction influence the relationship between compassion fatigue and mental illness among a population of veterinary nurses?

Hypotheses:
.

Hypothesis 1: There is a positive relationship between compassion fatigue and mental illness among a population of veterinary nurses.

Hypothesis 2: Compassion Satisfaction moderates the relationship between compassion fatigue and mental illness.

10.   Human Participants:
The population of the study is veterinary nurses in the United States of America. All nurses with at least six months of experience will be considered for the study (Jacobson, 2013). Nurses may participate regardless of age, position (Jacobson, 2013; Burtson & Stichler, 2010), or state registration status. Notably, such contexts may provide additional information regarding levels of compassion fatigue and mental illness among the population, as it could serve as a moderator in this relationship (Jacobson, 2013; Burtson & Stichler, 2010).

Three sources that are representative of the population will be used for sampling:

1. A large regional veterinary conference for veterinary nurses in December 2021, spanning a total of 4 days.
2. A large statewide veterinary nurse association with access to 1,000 members will distribute the survey to their members via social media platforms and email.
3. Surveys will also be distributed social media platforms of two influencers in the veterinary nursing profession, allowing exposure to an additional 25,000 potential respondents. Veterinarians and other support staff are excluded from this population.

Surveys will be distributed in several ways, depending upon the location of distribution. Conference attendees will receive the survey link as dispersed by the conference list serv. Surveys distributed via social media and digital platforms will receive the survey in the form of a link.

To address control variables, demographic information as well as information regarding substance usage, perceived organizational support, COVID-19 fear, and levels of self-compassion will be added to the study to determine impact to the relationship between compassion fatigue and depression.

11.   Procedures: Participants will be asked to respond to an online survey containing a total of 95 items (30 items from ProQOL-5, 7 items from the GAD-7, 9 items from the PHQ-9, and 49 demographic items). Participants may withdraw at any time by closing the browser window and may skip questions by selecting "I prefer not to answer".

12.   Consent: Participants will give informed consent to participate in this study by agreeing to move forward via a digital checkbox within the survey. Informed consent attached.

13. **Risks and Debriefing:** Psychological risks include possible triggers of past traumatic events. Participants will have the option of receiving information regarding crisis hotlines and general wellness information at the end of the study.

14. **Privacy and Storage of Data**: Surveys are anonymous, therefore participant identities are protected. Data will be stored on a password protected device, and password protected version of Jamovi.

15. **Pilot Testing**: The full survey has been pilot tested by two survey content experts and three veterinary nurses to ensure clarity of questions, general ease of use, length of time to complete, and readability. Survey link: https://www.surveymonkey.com/r/JX9WHQT

HOOD COLLEGE

Nov. 12, 2021

Carrie Johnson
401 Rosemont Ave.
Frederick, MD 21701

Dear Ms. Johnson,

The Hood College Institutional Review Board reviewed your research proposal for the study entitled, "The Role of Compassion Satisfaction on the Relationship Between Compassion Fatigue, Anxiety, and Depression in a Population of Veterinary Nurses" (Proposal # 2122-19). While this proposal reflects a very well-designed study and is itself very well organized, the committee, nonetheless, would like you to indicate the observance of the following conditions before a final approval letter is sent. Please respond via email with any supporting documents to show that you can meet the following conditions or explanation for any delay or lack of supporting documentation. Upon receipt, the IRB will expedite the final review for approval.

1) Please submit to the IRB some form of authorization, permission, approval to access respondents via the conference and the association you reference.
2) Please submit to the IRB for approval, first, any letter or email advertisement requesting response to the survey sent to either the administrators or to attendees.

3) If other listservs or organized access points are used to reach potential respondents, please provide some form of authorization, or provide a photo of the research related policies of the sources that would exempt a more formal notification.

Other than the stated points above, the IRB has a few editorial comments to use at your own discretion; no further response is required.
1. Concerning the Proposal:
    1) While a very large sample frame is proposed, there is not a projected range or number of respondents sought to provide for integrity of statistical analysis, etc.?
    2) Slight editorial notifications observed. Under "Key Concept," second paragraph, last sentence, word "dear" thought should be "fear." Under Hypothesis, No. 1 & 2 state the same. Perhaps, hypothesis number 2 should state "depression" rather than "anxiety"?

2. Concerning the Consent Form:
    1) Introduction, last sentence: should have the PI's name in addition to "Hood College."
    2) Duration: Question the estimate of time to complete the 95-question survey. Has PI pilot tested for timing in their population?

- An IRB member offers the attached article if interested.

Sincerely,

Jolene M. Sanders, Ph.D.
Chair, Hood College Institutional Review Board

Research Response to IRB Requested Edits

Dear Dr. Sanders,

Thank you for your review of my research proposal "The Role of Compassion Satisfaction on the Relationship Between Compassion Fatigue, Anxiety, and Depression in a Population of Veterinary Nurses" (Proposal # 2122-19), and your suggestions for strengthening my application to ensure IRB approval. Please find below my responses to each of your suggestions:

1) Please submit to the IRB some form of authorization, permission, approval to access respondents via the conference and the association you reference.

   Please find attached, a request letter to The Maryland Vet Tech Association (and their acceptance), as well as a letter to The North American Veterinary Community (NAVC/VMX) and the Mid-Western Veterinary Conference requesting permission to disseminate my survey broadly to all attendees (Attachment 1 and 2, below). Should permission not be granted at a national conference, the study will utilize data from social media and association members.

2) Please submit to the IRB for approval, first, any letter or email advertisement requesting response to the survey sent to either the administrators or to attendees.

   Please find attached a flier I will be distributing to participants at the conference (Attachment 3), as well as the contents of a social media post I will post to conference attendees and social media platforms (Attachment 4). These methods will help me reach out to conference attendees, even if formal authorization for broader dissemination by conference administrators is not received.

3) If other listservs or organized access points are used to reach potential respondents, please provide some form of authorization, or provide a photo of the research related policies of the sources that would exempt a more formal notification.

   Please see responses to 1 and 2 above.

Regarding your editorial comments within the proposal:

4. While a very large sample frame is proposed, there is not a projected range or number of respondents sought to provide for integrity of statistical analysis, etc.?

   Remaining aligned with other research studies, this study is not without limitations. The constructs of this study, while they are well tested and have evidence of strong psychometric properties, are measured using self-reported instruments. Assuming a survey-response rate of 10- 12% with a population of approximately 10,000 people, the desired sample size of the study is 137-160 responses. This lends to a moderate statistical power of 0.8 and p-value of 0.05, indicating a reasonable chance at finding statistically significant differences.

5. Slight editorial notifications observed. Under "Key Concept," second paragraph, last sentence, word "dear" thought should be "fear." Under Hypothesis, No. 1 & 2 state the same. Perhaps, hypothesis number 2 should state "depression" rather than "anxiety"?

    Thank you for addressing this error, this will be corrected.

Regarding your comments regarding the consent form within the survey:

6. Introduction, last sentence: should have the PI's name in addition to "Hood College."

    This will be modified for final survey.

7. Duration: Question the estimate of time to complete the 95-question survey. Has PI pilot tested for timing in their population?

    Pilot testing has been performed for this survey, utilizing three survey content experts and four veterinary nurses at two different veterinary hospitals. Time valuation of the survey in its current form produced results in 10-15 minutes in all respondents.

Attachment 1: Request and Response to Access of Respondents

Maryland Veterinary Technician Association

On Sat, Jun 26, 2021 at 9:41 AM Domino Carrie Elizabeth <ced14@hood.edu> wrote:
Hello,
I am currently a degree candidate for a Doctorate of Organizational Leadership at Hood College in Frederick, MD. Having been in the veterinary field for over 10 years at various capacities in the hospital, I am passionate about supporting and assisting in the growth of staff both physically and mentally.
My goal is to create initiatives to propel our industry forward through cultural shifts to make veterinary medicine a more collaborative and welcoming environment for all.

The dissertation research project I am currently working on focuses on the prevalence of burnout, compassion fatigue, anxiety, and depression on a population of veterinary nurses, and the impact this has on their professional quality of life. The project is still in its final stages of development; however, I was hopeful that your membership platform could assist in data collection to reach a wide range of respondents throughout the United States. This would be accomplished simply by sending/posting the link for the survey on your social media or sending to members. Prior to launching this Fall, the study will undergo full IRB review from my university.
I would enjoy the opportunity to collaborate and join forces to make our field the best it can be.

If you feel this might be a reasonable venture for your organization, please respond with questions and/or times to communicate further about this project. I am happy to provide any information requested and look forward to your response.

Thank you in advance for your assistance and collaboration,
Carrie Johnson, DOL(C), MBA, CCFP

From: MDVTA <marylandvettechs@gmail.com>
Sent: Monday, June 28, 2021 9:26 AM
To: Domino Carrie Elizabeth <ced14@hood.edu>
Subject: Re: Dissertation Research Assistance- Helping Improve the Vet Med Community

[CAUTION - External Email] This email originated from outside of Hood College. DO NOT click on links, open attachments or respond to requests if you were not expecting this email.

Good morning Ms. Johnson,

Thank you for your email and congratulations on your dissertation work! We would be happy to share your work and survey link with our membership and social media followers to aid in your research.
Please send to us the message you want us to share and whatever links you have to the surveys.

Thank you,
Nicki Castagna, RVT
President, MDVTA

Maryland Veterinary Technician Association, Inc.
PO Box 543
Fork, MD 21051
marylandvettechs@gmail.com
mdvta.wildapricot.org
We are a 501(c)(6) non-profit

Attachment 2: Request to Veterinary Conferences

<<Date>>

<<Administrator name>>
<<Administrator position>>
<<Organization name>>

Subject – Request for opportunity to launch survey at conference

Hello,

I am currently a degree candidate for a Doctorate of Organizational Leadership at Hood College in Frederick, MD. Having been in the veterinary field for almost a decade in various capacities, I have seen the prevalence of compassion fatigue, anxiety, and depression among veterinary nurses. My doctoral dissertation is focused on this topic with the hope that my research will provide insights on how to mitigate the development of these conditions.

I have followed your organization for xx years and I know that you are committed to building knowledge that will propel our field forward. I am writing to request an opportunity at the <<Conference>> to share my survey with conference participants to be able to collect data that will support my dissertation work. I am happy to work with you on the best way to disseminate information about this survey. For example, sharing information about my survey on your social media platform, or sending an email to conference participants. If there is a fee associated with the dispersing of the survey, I am more than happy to oblige.

I hope that you will be supportive of my research that aims to find opportunities to improve mental health for nurses in veterinary medicine.

I look forward to hearing from you.

Thank you in advance for your assistance and collaboration,
Carrie Johnson, DOL(C), MBA, CCFP

Attachment #3: Flier for Conference Participants

ARE YOU A VETERINARY NURSE?

IS YOUR COMPASSION FATIGUED?

Let's Improve our community, together!

PLEASE SCAN THE QR CODE BELOW TO TAKE AN IMPORTANT SURVEY THAT WILL IMPROVE QUALITY OF LIFE FOR VETERINARY STAFF!

Questions? Email ced14@hood.edu
This survey is part of a doctorate research study through
Hood College, Frederick, MD

Attachment #4: Social Media Post

Are you a veterinary nurse struggling with quality of work-life and compassion fatigue? If so, please consider taking the following survey to assist in bettering our community.

<<Survey Link>>

ARE YOU A VETERINARY NURSE?

LET'S IMPROVE VETERINARY-MEDICINE, TOGETHER!

Is your compassion fatigued?

PLEASE CLICK THE SURVEY LINK BELOW TO ASSIST IN IMPORTANT RESEARCH AND IMPROVE OUR COMMUNITY!

Notice of Final IRB Approval

Dec. 1, 2021

Carrie Johnson
401 Rosemont Ave.
Frederick, MD 21701

Dear Ms. Johnson,

The Hood College Institutional Review Board approves your study entitled "The Role of Compassion Satisfaction on the Relationship Between Compassion Fatigue, Anxiety, and Depression in a Population of Veterinary Nurses" (Proposal # 2122-19). Per the initial decision letter dated Nov. 12, you have accommodated the requests for supporting materials. Thank you for your attentive and easily read response.

If there should be substantial changes to your data collection methodology, the proposal would have to be reviewed by the IRB as a new proposal. While your study does not directly contact the human subject, please nonetheless observe the following statement as applicable.

All individuals engaged in human subjects research are responsible for compliance with all applicable Hood Research Policies:
https://www.hood.edu/sites/default/files/Hood%20IRB%20Policy%20revised%20September%202013.pdf

The Lead Researcher of the study is ultimately responsible for assuring all study team members review and adhere to applicable policies for the conduct of human sciences research.

The Hood College IRB approval (or exempt status) expiration date is Dec. 1, 2022. As a courtesy, approximately 30-60 days prior to expiration of this approval, it is your responsibility to apply for continuing review and receive continuing approval or (exempt status) for the duration of the study as applicable. Lapses in approval should be avoided to protect the safety and welfare of enrolled participants. No substantive changes are to be made to the approved protocol or the approved consent forms without the prior review and approval of the Hood IRB. All substantive changes (e.g. change in procedure, number of subjects, personnel, study locations, study instruments, etc.) must be prospectively reviewed and approved by the IRB before they are implemented.

All research must comply with the *Hood College Promise of Fall Plan* regarding COVID-19 precautions.

Sincerely,

Jolene M. Sanders, Ph.D.
Chair, Hood College Institutional Review Board

Appendix C

Full Model Coefficient Reporting

The following Appendix includes the full model coefficient reporting for each tested hypothesis.

Hypothesis 1:

Model Coefficient Results: Effect of Burnout and Secondary Traumatic Stress on Anxiety

Model 1

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept [a]	0.53218	1.317	0.40407	0.687	
Age:					
2 – 1	0.11691	0.184	0.63523	0.526	0.14789
3 – 1	-0.12859	0.216	-0.59552	0.552	-0.16268
4 – 1	-0.20707	0.252	-0.82117	0.413	-0.26196
5 – 1	0.13487	0.274	0.49204	0.623	0.17062
6 – 1	0.09137	0.32	0.28526	0.776	0.11559
7 – 1	-0.20049	0.359	-0.5587	0.577	-0.25364
8 – 1	-0.75687	0.395	-1.91521	0.057	-0.95749
Gender:					
2 – 1	-0.11553	0.295	-0.39198	0.695	-0.14615
3 – 1	0.78508	0.607	1.29426	0.197	0.99318
4 – 1	-0.03467	0.798	-0.04346	0.965	-0.04385
5 – 1	-0.07992	0.822	-0.09719	0.923	-0.1011
Race:					
1 – 0	1.21954	0.896	1.36177	0.175	1.54281
2 – 0	1.08262	0.956	1.13281	0.259	1.3696
3 – 0	0.77472	1.034	0.74942	0.454	0.98008
4 – 0	1.31215	1	1.31196	0.191	1.65997
5 – 0	1.56628	0.961	1.62994	0.105	1.98146
8 – 0	1.43485	0.97	1.4794	0.141	1.8152
Income:					
2 – 1	0.2437	0.284	0.85711	0.392	0.3083
3 – 1	0.10463	0.305	0.34351	0.732	0.13237
4 – 1	-0.04784	0.32	-0.1496	0.881	-0.06052
5 – 1	-0.08408	0.353	-0.23811	0.812	-0.10637
6 – 1	-0.02267	0.362	-0.0627	0.95	-0.02867
7 – 1	-0.40341	0.363	-1.11194	0.267	-0.51034
8 – 1	0.06865	0.346	0.19859	0.843	0.08684
US Rgn:					
2 – 1	0.1379	0.224	0.61574	0.539	0.17446
3 – 1	0.28636	0.17	1.68084	0.094	0.36227

4 – 1	0.13605	0.18	0.75508	0.451	0.17212
5 – 1	0.15839	0.206	0.7687	0.443	0.20037
6 – 1	0.40485	0.242	1.6737	0.096	0.51216
7 – 1	0.06581	0.176	0.37473	0.708	0.08325
Marital:					
2 – 1	0.0113	0.145	0.0779	0.938	0.01429
3 – 1	0.33347	0.155	2.14865	0.033	0.42186
4 – 1	-0.76689	0.829	-0.92528	0.356	-0.97018
5 – 1	0.03224	0.245	0.13144	0.896	0.04079
6 – 1	0.55747	0.814	0.68523	0.494	0.70525
Education:					
2 – 1	-1.2203	0.913	-1.33672	0.183	-1.54376
3 – 1	-1.34269	0.873	-1.53803	0.126	-1.6986
4 – 1	-1.7111	0.883	-1.93787	0.054	-2.16467
5 – 1	-1.5362	0.883	-1.73995	0.083	-1.94341
6 – 1	-1.45804	0.872	-1.67197	0.096	-1.84453
7 – 1	-1.43292	0.91	-1.575	0.117	-1.81275
8 – 1	-1.26252	0.924	-1.36616	0.173	-1.59718
9 – 1	-1.76569	1.058	-1.6691	0.097	-2.23373
Ten_Field:					
2 – 1	0.41531	0.425	0.9782	0.329	0.5254
3 – 1	0.74175	0.427	1.73536	0.084	0.93837
4 – 1	0.58821	0.438	1.34219	0.181	0.74413
5 – 1	1.11764	0.444	2.51715	0.013	1.4139
6 – 1	0.74965	0.462	1.62203	0.106	0.94837
7 – 1	1.17633	0.473	2.48794	0.014	1.48814
8 – 1	0.5753	0.451	1.27679	0.203	0.7278
Employment status:					
1 – 0	-0.21171	0.313	-0.67696	0.499	-0.26782
2 – 0	-0.04357	0.363	-0.12014	0.904	-0.05512
3 – 0	0.57841	0.514	1.12442	0.262	0.73173
Current Pos:					
1 – 0	-0.16012	1	-0.16012	0.873	-0.20256
2 – 0	0.00327	0.371	0.00881	0.993	0.00413
3 – 0	0.09349	0.237	0.395	0.693	0.11827
4 – 0	-0.08497	0.208	-0.40841	0.683	-0.10749
5 – 0	0.09275	0.297	0.31177	0.756	0.11733
6 – 0	0.06683	0.669	0.09994	0.92	0.08454
Ten-Posn:					
2 – 1	0.28414	0.247	1.15083	0.251	0.35946
3 – 1	0.25383	0.218	1.1659	0.245	0.32112
4 – 1	0.12675	0.25	0.50705	0.613	0.16034

	Estimate	SE	t	p	Stand. Estimate
5 – 1	-0.0225	0.255	-0.08831	0.93	-0.02847
6 – 1	0.29223	0.319	0.91712	0.36	0.3697
7 – 1	0.18179	0.259	0.70147	0.484	0.22997
Hosp type:					
1 – 0	-0.13099	0.175	-0.74716	0.456	-0.16572
2 – 0	0.67566	0.502	1.34462	0.18	0.85476
3 – 0	0.31299	0.322	0.97156	0.332	0.39596
4 – 0	0.16583	0.306	0.54264	0.588	0.20979
5 – 0	-0.09215	0.203	-0.45479	0.65	-0.11657
Geog work:					
2 – 1	0.03068	0.128	0.24037	0.81	0.03881
3 – 1	0.19737	0.162	1.22149	0.223	0.24969
Shift/week:					
2 – 1	0.22721	0.517	0.4393	0.661	0.28743
3 – 1	0.52079	0.439	1.18641	0.237	0.65884
4 – 1	0.66588	0.435	1.5313	0.127	0.84239
5 – 1	0.76481	0.596	1.28323	0.201	0.96754
Shift time:					
2 – 1	0.35082	0.236	1.48365	0.139	0.44382
3 – 1	0.32171	0.359	0.89567	0.372	0.40699
4 – 1	-0.0929	0.148	-0.62792	0.531	-0.11752
Euth/shift:					
2 – 1	-0.06318	0.127	-0.49654	0.62	-0.07993
3 – 1	0.31372	0.163	1.91965	0.056	0.39688
4 – 1	0.31679	0.273	1.1601	0.247	0.40077
5 – 1	0.1031	0.243	0.42457	0.672	0.13043

Model 2

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept [a]	0.53218	1.317	0.40407	0.687	
Age:					
2 – 1	0.11691	0.184	0.63523	0.526	0.14789
3 – 1	-0.12859	0.216	-0.59552	0.552	-0.16268
4 – 1	-0.20707	0.252	-0.82117	0.413	-0.26196
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7 – 1	-0.20049	0.359	-0.5587	0.577	-0.25364
8 – 1	-0.75687	0.395	-1.91521	0.057	-0.95749
Gender:					
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3 – 1	0.78508	0.607	1.29426	0.197	0.99318
4 – 1	-0.03467	0.798	-0.04346	0.965	-0.04385

5 – 1	-0.07992	0.822	-0.09719	0.923	-0.1011
Race:					
1 – 0	1.21954	0.896	1.36177	0.175	1.54281
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5 – 0	1.56628	0.961	1.62994	0.105	1.98146
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3 – 1	0.10463	0.305	0.34351	0.732	0.13237
4 – 1	-0.04784	0.32	-0.1496	0.881	-0.06052
5 – 1	-0.08408	0.353	-0.23811	0.812	-0.10637
6 – 1	-0.02267	0.362	-0.0627	0.95	-0.02867
7 – 1	-0.40341	0.363	-1.11194	0.267	-0.51034
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4 – 1	0.13605	0.18	0.75508	0.451	0.17212
5 – 1	0.15839	0.206	0.7687	0.443	0.20037
6 – 1	0.40485	0.242	1.6737	0.096	0.51216
7 – 1	0.06581	0.176	0.37473	0.708	0.08325
Marital:					
2 – 1	0.0113	0.145	0.0779	0.938	0.01429
3 – 1	0.33347	0.155	2.14865	0.033	0.42186
4 – 1	-0.76689	0.829	-0.92528	0.356	-0.97018
5 – 1	0.03224	0.245	0.13144	0.896	0.04079
6 – 1	0.55747	0.814	0.68523	0.494	0.70525
Education:					
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3 – 1	-1.34269	0.873	-1.53803	0.126	-1.6986
4 – 1	-1.7111	0.883	-1.93787	0.054	-2.16467
5 – 1	-1.5362	0.883	-1.73995	0.083	-1.94341
6 – 1	-1.45804	0.872	-1.67197	0.096	-1.84453
7 – 1	-1.43292	0.91	-1.575	0.117	-1.81275
8 – 1	-1.26252	0.924	-1.36616	0.173	-1.59718
9 – 1	-1.76569	1.058	-1.6691	0.097	-2.23373
Ten_Field:					
2 – 1	0.41531	0.425	0.9782	0.329	0.5254
3 – 1	0.74175	0.427	1.73536	0.084	0.93837
4 – 1	0.58821	0.438	1.34219	0.181	0.74413
5 – 1	1.11764	0.444	2.51715	0.013	1.4139

6 – 1	0.74965	0.462	1.62203	0.106	0.94837
7 – 1	1.17633	0.473	2.48794	0.014	1.48814
8 – 1	0.5753	0.451	1.27679	0.203	0.7278
Employment status:					
1 – 0	-0.21171	0.313	-0.67696	0.499	-0.26782
2 – 0	-0.04357	0.363	-0.12014	0.904	-0.05512
3 – 0	0.57841	0.514	1.12442	0.262	0.73173
Current Pos:					
1 – 0	-0.16012	1	-0.16012	0.873	-0.20256
2 – 0	0.00327	0.371	0.00881	0.993	0.00413
3 – 0	0.09349	0.237	0.395	0.693	0.11827
4 – 0	-0.08497	0.208	-0.40841	0.683	-0.10749
5 – 0	0.09275	0.297	0.31177	0.756	0.11733
6 – 0	0.06683	0.669	0.09994	0.92	0.08454
Ten-Posn:					
2 – 1	0.28414	0.247	1.15083	0.251	0.35946
3 – 1	0.25383	0.218	1.1659	0.245	0.32112
4 – 1	0.12675	0.25	0.50705	0.613	0.16034
5 – 1	-0.0225	0.255	-0.08831	0.93	-0.02847
6 – 1	0.29223	0.319	0.91712	0.36	0.3697
7 – 1	0.18179	0.259	0.70147	0.484	0.22997
Hosp type:					
1 – 0	-0.13099	0.175	-0.74716	0.456	-0.16572
2 – 0	0.67566	0.502	1.34462	0.18	0.85476
3 – 0	0.31299	0.322	0.97156	0.332	0.39596
4 – 0	0.16583	0.306	0.54264	0.588	0.20979
5 – 0	-0.09215	0.203	-0.45479	0.65	-0.11657
Geog work:					
2 – 1	0.03068	0.128	0.24037	0.81	0.03881
3 – 1	0.19737	0.162	1.22149	0.223	0.24969
Shift/week:					
2 – 1	0.22721	0.517	0.4393	0.661	0.28743
3 – 1	0.52079	0.439	1.18641	0.237	0.65884
4 – 1	0.66588	0.435	1.5313	0.127	0.84239
5 – 1	0.76481	0.596	1.28323	0.201	0.96754
Shift time:					
2 – 1	0.35082	0.236	1.48365	0.139	0.44382
3 – 1	0.32171	0.359	0.89567	0.372	0.40699
4 – 1	-0.0929	0.148	-0.62792	0.531	-0.11752
Euth/shift:					
2 – 1	-0.06318	0.127	-0.49654	0.62	-0.07993
3 – 1	0.31372	0.163	1.91965	0.056	0.39688

4 – 1	0.31679	0.273	1.1601	0.247	0.40077
5 – 1	0.1031	0.243	0.42457	0.672	0.13043

Model 3

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept [a]	-0.31293	1.126	-0.27791	0.781	
Age:					
2 – 1	0.01279	0.1431	0.08936	0.929	0.01618
3 – 1	-0.12911	0.168	-0.76829	0.443	-0.16333
4 – 1	-0.22025	0.1967	-1.11982	0.264	-0.27864
5 – 1	-0.00139	0.2138	-0.0065	0.995	-0.00176
6 – 1	0.07675	0.2486	0.30879	0.758	0.0971
7 – 1	-0.10652	0.2788	-0.38213	0.703	-0.13476
8 – 1	-0.61918	0.3088	-2.00504	0.046	-0.78331
Gender:					
2 – 1	-0.18444	0.2313	-0.79741	0.426	-0.23333
3 – 1	0.68849	0.4737	1.4533	0.148	0.871
4 – 1	-0.72646	0.6296	-1.15388	0.25	-0.91903
5 – 1	0.26113	0.639	0.40867	0.683	0.33035
Race:					
1 – 0	0.44563	0.7024	0.63443	0.527	0.56376
2 – 0	0.28263	0.7537	0.37501	0.708	0.35755
3 – 0	0.4313	0.8069	0.53452	0.594	0.54562
4 – 0	0.64247	0.7807	0.82299	0.412	0.81277
5 – 0	0.56732	0.7583	0.7481	0.455	0.7177
8 – 0	0.40997	0.7598	0.53955	0.59	0.51864
Income:					
2 – 1	0.23615	0.2213	1.06726	0.287	0.29874
3 – 1	-0.06475	0.237	-0.27322	0.785	-0.08192
4 – 1	-0.04846	0.2487	-0.19481	0.846	-0.0613
5 – 1	-0.1687	0.276	-0.61127	0.542	-0.21341
6 – 1	-0.13626	0.2813	-0.48436	0.629	-0.17238
7 – 1	-0.17964	0.2834	-0.63395	0.527	-0.22726
8 – 1	-0.14253	0.2691	-0.52974	0.597	-0.18032
US Rgn:					
2 – 1	0.10651	0.1752	0.60811	0.544	0.13475
3 – 1	0.10661	0.1332	0.80034	0.424	0.13487
4 – 1	-0.06514	0.1413	-0.46098	0.645	-0.0824
5 – 1	0.07203	0.1611	0.44702	0.655	0.09113
6 – 1	-0.0332	0.1922	-0.17271	0.863	-0.042
7 – 1	-0.04287	0.137	-0.31291	0.755	-0.05424
Marital:					

2 – 1	0.14724	0.1138	1.29417	0.197	0.18628
3 – 1	0.20343	0.1219	1.66863	0.097	0.25735
4 – 1	-0.24289	0.6479	-0.37486	0.708	-0.30727
5 – 1	0.04499	0.191	0.23555	0.814	0.05692
6 – 1	0.01663	0.6384	0.02605	0.979	0.02104
Education:					
2 – 1	-0.27171	0.7165	-0.37923	0.705	-0.34373
3 – 1	-0.33651	0.6879	-0.48919	0.625	-0.42571
4 – 1	-0.58741	0.6959	-0.84414	0.4	-0.74311
5 – 1	-0.46194	0.695	-0.66468	0.507	-0.58438
6 – 1	-0.44232	0.6858	-0.64496	0.52	-0.55957
7 – 1	-0.26359	0.7184	-0.36693	0.714	-0.33346
8 – 1	-0.42785	0.7242	-0.59077	0.555	-0.54126
9 – 1	-0.64308	0.8278	-0.7769	0.438	-0.81355
Ten_Field:					
2 – 1	0.3284	0.3314	0.99106	0.323	0.41545
3 – 1	0.38738	0.3345	1.15801	0.248	0.49007
4 – 1	0.12014	0.3478	0.34546	0.73	0.15199
5 – 1	0.43675	0.3506	1.24571	0.214	0.55252
6 – 1	0.37677	0.3613	1.04286	0.298	0.47664
7 – 1	0.65708	0.3723	1.76491	0.079	0.83126
8 – 1	0.10736	0.3546	0.30274	0.762	0.13582
Employment status:					
1 – 0	-0.26231	0.2444	-1.07338	0.284	-0.33184
2 – 0	-0.21284	0.2854	-0.74569	0.457	-0.26926
3 – 0	0.15644	0.4087	0.38275	0.702	0.19791
Current Pos:					
1 – 0	-0.25456	0.7791	-0.32676	0.744	-0.32204
2 – 0	-0.23094	0.2946	-0.78388	0.434	-0.29216
3 – 0	-0.03968	0.1867	-0.21258	0.832	-0.0502
4 – 0	-0.04462	0.163	-0.2738	0.785	-0.05645
5 – 0	-0.02847	0.2332	-0.12209	0.903	-0.03602
6 – 0	0.3733	0.5274	0.70778	0.48	0.47225
Ten-Posn:					
2 – 1	0.18909	0.1933	0.97805	0.329	0.23921
3 – 1	0.16146	0.1708	0.94533	0.346	0.20426
4 – 1	0.18593	0.198	0.93901	0.349	0.23522
5 – 1	0.03538	0.198	0.1787	0.858	0.04476
6 – 1	0.0873	0.2486	0.35118	0.726	0.11044
7 – 1	0.19135	0.2013	0.9506	0.343	0.24208
Hosp type:					
1 – 0	-0.15101	0.1384	-1.09101	0.277	-0.19104

	Estimate	SE	t	p	Stand. Estimate
2 – 0	0.88893	0.3914	2.27124	0.024	1.12456
3 – 0	0.36889	0.2503	1.47382	0.142	0.46667
4 – 0	-7.72e−4	0.2381	-0.00324	0.997	-9.77e−4
5 – 0	0.08705	0.1597	0.54503	0.586	0.11012
Geog work:					
2 – 1	0.02248	0.0994	0.22624	0.821	0.02844
3 – 1	0.06179	0.1264	0.48882	0.626	0.07816
Shift/week:					
2 – 1	-0.05328	0.4138	-0.12877	0.898	-0.0674
3 – 1	0.02115	0.3503	0.06038	0.952	0.02676
4 – 1	0.12166	0.3463	0.3513	0.726	0.15391
5 – 1	-0.25957	0.4797	-0.5411	0.589	-0.32838
Shift time:					
2 – 1	0.11927	0.1875	0.63598	0.526	0.15089
3 – 1	0.2974	0.2804	1.06066	0.29	0.37623
4 – 1	-0.07075	0.1158	-0.61084	0.542	-0.08951
Euth/shift:					
2 – 1	-0.18436	0.1029	-1.79198	0.075	-0.23322
3 – 1	-0.00951	0.1319	-0.07209	0.943	-0.01203
4 – 1	0.0321	0.2145	0.14965	0.881	0.0406
5 – 1	-0.11365	0.1903	-0.59732	0.551	-0.14378
POSS	0.09605	0.0448	2.14353	0.033	0.13145
SelfComp	-0.37239	0.0826	-4.51075	<.001	-0.2598
FOC-Mean	0.1459	0.0465	3.13784	0.002	0.16571
BO	0.71934	0.1022	7.04062	<.001	0.45047

Model 4

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept [a]	-0.4222	1.0754	-0.3926	0.695	
Age:					
2 – 1	-0.0323	0.137	-0.2355	0.814	-0.0408
3 – 1	-0.1113	0.1605	-0.6936	0.489	-0.1408
4 – 1	-0.2226	0.1878	-1.1856	0.237	-0.2817
5 – 1	-0.0547	0.2045	-0.2675	0.789	-0.0692
6 – 1	0.0566	0.2374	0.2385	0.812	0.0716
7 – 1	0.0689	0.269	0.256	0.798	0.0871
8 – 1	-0.5181	0.2957	-1.752	0.081	-0.6554
Gender:					
2 – 1	-0.1768	0.2209	-0.8005	0.424	-0.2236
3 – 1	0.4212	0.4563	0.9232	0.357	0.5329
4 – 1	-1.0269	0.6049	-1.6977	0.091	-1.2991
5 – 1	0.4045	0.6109	0.662	0.509	0.5117

Race:					
1 – 0	0.4302	0.6707	0.6414	0.522	0.5442
2 – 0	0.2988	0.7196	0.4153	0.678	0.378
3 – 0	0.4059	0.7704	0.5268	0.599	0.5135
4 – 0	0.47	0.7464	0.6297	0.53	0.5946
5 – 0	0.572	0.7241	0.79	0.43	0.7237
8 – 0	0.4316	0.7255	0.595	0.553	0.5461
Income:					
2 – 1	0.2093	0.2114	0.9902	0.323	0.2648
3 – 1	-0.043	0.2263	-0.19	0.85	-0.0544
4 – 1	-0.0155	0.2376	-0.0653	0.948	-0.0196
5 – 1	-0.1026	0.2639	-0.3887	0.698	-0.1298
6 – 1	-0.1097	0.2687	-0.4082	0.684	-0.1387
7 – 1	-0.2212	0.2707	-0.8171	0.415	-0.2798
8 – 1	-0.0987	0.2571	-0.3839	0.701	-0.1249
US Rgn:					
2 – 1	0.0867	0.1673	0.5181	0.605	0.1096
3 – 1	0.1362	0.1274	1.0691	0.286	0.1722
4 – 1	-0.0106	0.1355	-0.0782	0.938	-0.0134
5 – 1	0.0259	0.1542	0.1681	0.867	0.0328
6 – 1	-0.0285	0.1835	-0.1553	0.877	-0.0361
7 – 1	-0.0311	0.1308	-0.238	0.812	-0.0394
Marital:					
2 – 1	0.1616	0.1087	1.4866	0.139	0.2044
3 – 1	0.2074	0.1164	1.7821	0.076	0.2624
4 – 1	0.0869	0.623	0.1394	0.889	0.1099
5 – 1	0.0212	0.1825	0.1164	0.907	0.0269
6 – 1	-0.3464	0.615	-0.5633	0.574	-0.4382
Education:					
2 – 1	-0.4595	0.6854	-0.6705	0.503	-0.5814
3 – 1	-0.4108	0.657	-0.6252	0.533	-0.5196
4 – 1	-0.6276	0.6645	-0.9446	0.346	-0.794
5 – 1	-0.5196	0.6637	-0.7829	0.435	-0.6573
6 – 1	-0.5306	0.6551	-0.8099	0.419	-0.6712
7 – 1	-0.2188	0.686	-0.3189	0.75	-0.2767
8 – 1	-0.5447	0.692	-0.7871	0.432	-0.689
9 – 1	-0.5843	0.7904	-0.7392	0.461	-0.7392
Ten_Field:					
2 – 1	0.3735	0.3165	1.1799	0.239	0.4725
3 – 1	0.355	0.3195	1.1112	0.268	0.4491
4 – 1	0.1762	0.3323	0.5303	0.597	0.2229
5 – 1	0.3684	0.3351	1.0994	0.273	0.4661
6 – 1	0.3107	0.3453	0.8998	0.369	0.393

7 – 1	0.556	0.3562	1.5609	0.12	0.7034
8 – 1	0.0999	0.3386	0.2951	0.768	0.1264
Employment status:					
1 – 0	-0.2552	0.2333	-1.0937	0.275	-0.3228
2 – 0	-0.2673	0.2728	-0.9799	0.328	-0.3382
3 – 0	0.1548	0.3903	0.3967	0.692	0.1958
Current Pos:					
1 – 0	-0.2562	0.7438	-0.3444	0.731	-0.3241
2 – 0	-0.151	0.2819	-0.5357	0.593	-0.191
3 – 0	-0.1289	0.1794	-0.7189	0.473	-0.1631
4 – 0	-0.071	0.1557	-0.4559	0.649	-0.0898
5 – 0	-0.022	0.2227	-0.0986	0.922	-0.0278
6 – 0	0.3456	0.5036	0.6862	0.493	0.4372
Ten-Posn:					
2 – 1	0.1835	0.1846	0.9939	0.322	0.2321
3 – 1	0.1813	0.1631	1.1112	0.268	0.2293
4 – 1	0.1642	0.1891	0.868	0.386	0.2077
5 – 1	0.0784	0.1893	0.414	0.679	0.0991
6 – 1	0.1894	0.2384	0.7943	0.428	0.2396
7 – 1	0.1586	0.1923	0.8248	0.41	0.2007
Hosp type:					
1 – 0	-0.0851	0.133	-0.6396	0.523	-0.1076
2 – 0	0.5307	0.3822	1.3885	0.167	0.6713
3 – 0	0.3909	0.239	1.6352	0.104	0.4945
4 – 0	-0.0648	0.2278	-0.2843	0.776	-0.0819
5 – 0	0.1236	0.1527	0.8091	0.419	0.1563
Geog work:					
2 – 1	0.0354	0.0949	0.3726	0.71	0.0448
3 – 1	0.034	0.1208	0.2815	0.779	0.043
Shift/week:					
2 – 1	-0.2191	0.3968	-0.5522	0.581	-0.2772
3 – 1	-0.1728	0.3373	-0.5123	0.609	-0.2186
4 – 1	-0.0796	0.3337	-0.2385	0.812	-0.1007
5 – 1	-0.5144	0.4616	-1.1145	0.266	-0.6507
Shift time:					
2 – 1	0.0109	0.1807	0.0604	0.952	0.0138
3 – 1	0.1728	0.2692	0.6422	0.522	0.2187
4 – 1	-0.1306	0.1114	-1.1721	0.243	-0.1652
Euth/shift:					
2 – 1	-0.1717	0.0983	-1.7477	0.082	-0.2173
3 – 1	0.0328	0.1263	0.2596	0.795	0.0415
4 – 1	0.0905	0.2052	0.441	0.66	0.1145

5 – 1	-0.0921	0.1817	-0.5066	0.613	-0.1165
POSS	0.0713	0.0431	1.6532	0.1	0.0976
SelfComp	-0.3056	0.0802	-3.809	<.001	-0.2132
FOC-Mean	0.0983	0.0457	2.1525	0.033	0.1116
BO	0.5059	0.1086	4.6577	<.001	0.3168
STS	0.3575	0.08	4.4715	<.001	0.2925

[a] Represents reference level

Hypothesis 2:

Model Coefficient Results: Effect of Burnout and Secondary Traumatic Stress on Depression

Model 1

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept [a]	-0.89996	1.234	-0.72935	0.467	
Age:					
2 – 1	0.2063	0.172	1.19648	0.233	0.27567
3 – 1	0.04416	0.202	0.2183	0.827	0.05901
4 – 1	-0.04195	0.236	-0.17759	0.859	-0.05606
5 – 1	0.34533	0.257	1.34471	0.18	0.46146
6 – 1	0.00203	0.3	0.00677	0.995	0.00271
7 – 1	0.03785	0.336	0.11258	0.91	0.05058
8 – 1	-0.33475	0.37	-0.90413	0.367	-0.44732
Gender:					
2 – 1	0.3647	0.276	1.32077	0.188	0.48735
3 – 1	0.74116	0.568	1.30418	0.194	0.99042
4 – 1	1.34719	0.747	1.80274	0.073	1.80025
5 – 1	-1.09068	0.77	-1.41581	0.158	-1.45747
Race:					
1 – 0	1.171	0.839	1.39567	0.164	1.56481
2 – 0	1.49777	0.895	1.67279	0.096	2.00147
3 – 0	0.63302	0.969	0.6536	0.514	0.84591
4 – 0	1.06706	0.937	1.13879	0.256	1.42592
5 – 0	1.16491	0.9	1.29394	0.197	1.55667
8 – 0	1.24489	0.909	1.37002	0.172	1.66355
Income:					
2 – 1	0.04267	0.266	0.16018	0.873	0.05702
3 – 1	0.06547	0.285	0.22942	0.819	0.08749
4 – 1	-0.13649	0.3	-0.45559	0.649	-0.18239
5 – 1	-0.19041	0.331	-0.57556	0.566	-0.25445
6 – 1	-0.26271	0.339	-0.77567	0.439	-0.35107

7 – 1	-0.45598	0.34	-1.34154	0.181	-0.60933
8 – 1	-0.10064	0.324	-0.31077	0.756	-0.13449
US Rgn:					
2 – 1	0.17211	0.21	0.82025	0.413	0.22999
3 – 1	0.31595	0.16	1.97944	0.049	0.4222
4 – 1	0.22312	0.169	1.32172	0.188	0.29815
5 – 1	0.27431	0.193	1.42101	0.157	0.36656
6 – 1	0.47726	0.227	2.10599	0.036	0.63776
7 – 1	0.07641	0.165	0.46441	0.643	0.10211
Marital:					
2 – 1	-0.174	0.136	-1.28048	0.202	-0.23251
3 – 1	0.25443	0.145	1.74984	0.082	0.34
4 – 1	-0.36743	0.777	-0.47319	0.637	-0.491
5 – 1	0.11878	0.23	0.51688	0.606	0.15873
6 – 1	0.55936	0.762	0.73387	0.464	0.74748
Education:					
2 – 1	-0.60387	0.855	-0.70605	0.481	-0.80695
3 – 1	-0.77891	0.818	-0.95234	0.342	-1.04085
4 – 1	-0.9723	0.827	-1.17534	0.241	-1.29928
5 – 1	-0.8804	0.827	-1.06436	0.288	-1.17648
6 – 1	-0.75497	0.817	-0.92407	0.357	-1.00886
7 – 1	-0.99151	0.852	-1.16325	0.246	-1.32496
8 – 1	-0.83456	0.866	-0.96392	0.336	-1.11522
9 – 1	-1.35538	0.991	-1.36756	0.173	-1.8112
Ten_Field:					
2 – 1	0.58385	0.398	1.46783	0.144	0.7802
3 – 1	0.99294	0.4	2.47955	0.014	1.32687
4 – 1	0.74607	0.411	1.81709	0.071	0.99698
5 – 1	0.98137	0.416	2.35916	0.019	1.31141
6 – 1	0.89371	0.433	2.064	0.04	1.19426
7 – 1	1.28721	0.443	2.90588	0.004	1.7201
8 – 1	0.82712	0.422	1.95934	0.051	1.10528
Employment status:					
1 – 0	0.10594	0.293	0.36159	0.718	0.14157
2 – 0	0.19183	0.34	0.56458	0.573	0.25634
3 – 0	0.50553	0.482	1.04896	0.295	0.67554
Current Pos:					
1 – 0	-0.05223	0.937	-0.05575	0.956	-0.0698
2 – 0	-0.17251	0.347	-0.4966	0.62	-0.23052
3 – 0	0.32	0.222	1.44309	0.151	0.42761
4 – 0	0.00151	0.195	0.00774	0.994	0.00202
5 – 0	0.05326	0.279	0.1911	0.849	0.07117

6 – 0	0.24511	0.626	0.39124	0.696	0.32755
Ten-Posn:					
2 – 1	0.07407	0.231	0.32021	0.749	0.09898
3 – 1	0.0691	0.204	0.33879	0.735	0.09234
4 – 1	0.01471	0.234	0.06282	0.95	0.01966
5 – 1	0.02902	0.239	0.12156	0.903	0.03878
6 – 1	0.10782	0.299	0.36116	0.718	0.14408
7 – 1	0.13691	0.243	0.56391	0.573	0.18296
Hosp type:					
1 – 0	-0.22461	0.164	-1.36749	0.173	-0.30015
2 – 0	0.86283	0.471	1.8328	0.068	1.15301
3 – 0	0.13818	0.302	0.45782	0.648	0.18465
4 – 0	-0.1079	0.286	-0.37685	0.707	-0.14419
5 – 0	-0.29982	0.19	-1.57949	0.116	-0.40065
Geog work:					
2 – 1	0.1244	0.12	1.04042	0.299	0.16624
3 – 1	0.24114	0.151	1.59297	0.113	0.32224
Shift/week:					
2 – 1	0.5223	0.485	1.0779	0.282	0.69795
3 – 1	0.56386	0.411	1.37106	0.172	0.75348
4 – 1	0.71893	0.407	1.76469	0.079	0.96071
5 – 1	1.37931	0.558	2.47019	0.014	1.84317
Shift time:					
2 – 1	0.19666	0.222	0.88771	0.376	0.26279
3 – 1	0.71693	0.337	2.13045	0.034	0.95803
4 – 1	0.12647	0.139	0.91244	0.363	0.169
Euth/shift:					
2 – 1	0.09929	0.119	0.83287	0.406	0.13268
3 – 1	0.16672	0.153	1.08886	0.278	0.22278
4 – 1	0.22918	0.256	0.8958	0.371	0.30625
5 – 1	0.16097	0.228	0.70754	0.48	0.21511

Model 2

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept [a]	0.7223	1.1122	0.6494	0.517	
Age:					
2 – 1	0.1631	0.1484	1.0987	0.273	0.2179
3 – 1	0.0885	0.1745	0.5072	0.613	0.1183
4 – 1	-0.0552	0.2043	-0.2703	0.787	-0.0738
5 – 1	0.189	0.2221	0.851	0.396	0.2526
6 – 1	1.98E-04	0.2582	7.67E-04	0.999	2.65E-04
7 – 1	0.1171	0.2896	0.4043	0.686	0.1565

8 – 1	-0.3264	0.3201	-1.0196	0.309	-0.4361
Gender:					
2 – 1	0.3023	0.2403	1.2579	0.21	0.4039
3 – 1	0.8296	0.4911	1.6892	0.093	1.1086
4 – 1	0.6654	0.6539	1.0175	0.31	0.8892
5 – 1	-0.7923	0.6638	-1.1936	0.234	-1.0588
Race:					
1 – 0	1.0737	0.7238	1.4833	0.14	1.4347
2 – 0	1.612	0.7726	2.0865	0.038	2.1541
3 – 0	0.7719	0.8358	0.9235	0.357	1.0315
4 – 0	1.0154	0.806	1.2599	0.209	1.3569
5 – 0	1.0074	0.7787	1.2938	0.197	1.3463
8 – 0	0.8354	0.7854	1.0638	0.289	1.1164
Income:					
2 – 1	-0.0164	0.2298	-0.0714	0.943	-0.0219
3 – 1	-0.0617	0.2462	-0.2506	0.802	-0.0824
4 – 1	-0.2068	0.2582	-0.8009	0.424	-0.2764
5 – 1	-0.4037	0.2859	-1.412	0.16	-0.5395
6 – 1	-0.3545	0.2923	-1.2129	0.227	-0.4737
7 – 1	-0.4075	0.2932	-1.3901	0.166	-0.5446
8 – 1	-0.2768	0.2795	-0.9902	0.323	-0.3698
US Rgn:					
2 – 1	0.2228	0.1814	1.2283	0.221	0.2977
3 – 1	0.2039	0.138	1.4771	0.141	0.2724
4 – 1	0.0482	0.1468	0.3282	0.743	0.0644
5 – 1	0.2124	0.1673	1.2695	0.206	0.2839
6 – 1	0.283	0.197	1.4367	0.152	0.3782
7 – 1	0.0378	0.1421	0.2662	0.79	0.0506
Marital:					
2 – 1	-0.0373	0.1182	-0.3154	0.753	-0.0498
3 – 1	0.2524	0.1253	2.0141	0.045	0.3373
4 – 1	-0.0648	0.6728	-0.0962	0.923	-0.0865
5 – 1	0.1745	0.1983	0.8798	0.38	0.2331
6 – 1	0.0253	0.6632	0.0382	0.97	0.0339
Education:					
2 – 1	-0.2473	0.7387	-0.3348	0.738	-0.3305
3 – 1	-0.2373	0.7108	-0.3339	0.739	-0.3171
4 – 1	-0.4415	0.7173	-0.6155	0.539	-0.59
5 – 1	-0.3198	0.7176	-0.4456	0.656	-0.4274
6 – 1	-0.2714	0.7078	-0.3835	0.702	-0.3627
7 – 1	-0.3505	0.7416	-0.4727	0.637	-0.4684
8 – 1	-0.4784	0.7487	-0.639	0.524	-0.6393
9 – 1	-0.8146	0.8555	-0.9522	0.342	-1.0886

Ten_Field:

2 – 1	0.691	0.3431	2.0143	0.045	0.9234
3 – 1	0.9302	0.3451	2.6954	0.008	1.2431
4 – 1	0.7638	0.3542	2.1567	0.032	1.0207
5 – 1	0.6975	0.3597	1.939	0.054	0.9321
6 – 1	0.8296	0.3726	2.2265	0.027	1.1086
7 – 1	1.2065	0.3814	3.1637	0.002	1.6122
8 – 1	0.7337	0.3641	2.0151	0.045	0.9805

Employment status:

1 – 0	0.1577	0.2533	0.6225	0.534	0.2107
2 – 0	0.2045	0.295	0.6932	0.489	0.2733
3 – 0	0.2401	0.4234	0.5671	0.571	0.3209

Current Pos:

1 – 0	-0.4292	0.8079	-0.5313	0.596	-0.5736
2 – 0	-0.5935	0.3044	-1.9494	0.053	-0.7931
3 – 0	0.0849	0.1934	0.439	0.661	0.1134
4 – 0	-0.0893	0.1681	-0.5309	0.596	-0.1193
5 – 0	-0.1817	0.2418	-0.7514	0.453	-0.2428
6 – 0	0.2915	0.5474	0.5325	0.595	0.3895

Ten-Posn:

2 – 1	-0.0671	0.2008	-0.334	0.739	-0.0896
3 – 1	-0.0399	0.1774	-0.2248	0.822	-0.0533
4 – 1	-0.0521	0.2052	-0.2539	0.8	-0.0696
5 – 1	0.0545	0.2057	0.2649	0.791	0.0728
6 – 1	0.0312	0.2575	0.1213	0.904	0.0417
7 – 1	0.1515	0.2091	0.7246	0.47	0.2025

Hosp type:

1 – 0	-0.2446	0.1438	-1.7012	0.09	-0.3268
2 – 0	0.9545	0.4062	2.3502	0.02	1.2756
3 – 0	0.1425	0.2599	0.5482	0.584	0.1904
4 – 0	-0.2117	0.2472	-0.8565	0.393	-0.2829
5 – 0	-0.2189	0.1654	-1.3236	0.187	-0.2926

Geog work:

2 – 1	0.1352	0.1032	1.3099	0.192	0.1806
3 – 1	0.1543	0.1311	1.1768	0.241	0.2061

Shift/week:

2 – 1	-0.0356	0.4282	-0.083	0.934	-0.0475
3 – 1	0.1073	0.3638	0.2949	0.768	0.1433
4 – 1	0.2377	0.3596	0.6611	0.509	0.3176
5 – 1	0.5219	0.4975	1.0489	0.295	0.6974

Shift time:

2 – 1	0.1469	0.1931	0.7604	0.448	0.1962

	Estimate	SE	t	p	Stand. Estimate
3 – 1	0.7828	0.2912	2.6886	0.008	1.046
4 – 1	0.194	0.1202	1.6145	0.108	0.2592
Euth/shift:					
2 – 1	0.0699	0.1056	0.6625	0.508	0.0935
3 – 1	0.0633	0.1329	0.4764	0.634	0.0846
4 – 1	0.1071	0.2217	0.483	0.63	0.1431
5 – 1	-0.0256	0.1976	-0.1298	0.897	-0.0343
POSS	-0.0601	0.0431	-1.3934	0.165	-0.0869
SelfComp	-0.5334	0.0802	-6.6481	< .001	-0.3931
FOC-Mean	0.1244	0.0483	2.5745	0.011	0.1492

Model 3

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept [a]	-1.85902	1.0107	-1.8393	0.067	
Age:					
2 – 1	0.10323	0.1285	0.8036	0.423	0.1379
3 – 1	0.0486	0.1508	0.3222	0.748	0.0649
4 – 1	-0.03355	0.1765	-0.19	0.849	-0.0448
5 – 1	0.2172	0.1919	1.1317	0.259	0.2902
6 – 1	-0.01059	0.2231	-0.0474	0.962	-0.0141
7 – 1	0.14134	0.2502	0.5649	0.573	0.1889
8 – 1	-0.17189	0.2772	-0.6201	0.536	-0.2297
Gender:					
2 – 1	0.28643	0.2076	1.3796	0.169	0.3828
3 – 1	0.5988	0.4252	1.4081	0.161	0.8002
4 – 1	0.76709	0.5651	1.3574	0.176	1.0251
5 – 1	-0.74292	0.5735	-1.2953	0.197	-0.9928
Race:					
1 – 0	0.41473	0.6305	0.6578	0.511	0.5542
2 – 0	0.70644	0.6765	1.0443	0.298	0.944
3 – 0	0.3158	0.7243	0.436	0.663	0.422
4 – 0	0.37082	0.7007	0.5292	0.597	0.4955
5 – 0	0.15482	0.6807	0.2274	0.82	0.2069
8 – 0	0.26708	0.682	0.3916	0.696	0.3569
Income:					
2 – 1	0.02453	0.1986	0.1235	0.902	0.0328
3 – 1	-0.09556	0.2127	-0.4492	0.654	-0.1277
4 – 1	-0.1363	0.2233	-0.6104	0.542	-0.1821
5 – 1	-0.25327	0.2477	-1.0224	0.308	-0.3384
6 – 1	-0.35252	0.2525	-1.396	0.164	-0.4711
7 – 1	-0.21553	0.2544	-0.8474	0.398	-0.288
8 – 1	-0.29848	0.2415	-1.2359	0.218	-0.3989

US Rgn:

2 – 1	0.11861	0.1572	0.7544	0.452	0.1585
3 – 1	0.13256	0.1196	1.1087	0.269	0.1771
4 – 1	0.03094	0.1268	0.244	0.808	0.0413
5 – 1	0.17517	0.1446	1.2111	0.227	0.2341
6 – 1	0.04851	0.1725	0.2811	0.779	0.0648
7 – 1	-0.02216	0.123	-0.1802	0.857	-0.0296

Marital:

2 – 1	-0.05107	0.1021	-0.5001	0.618	-0.0682
3 – 1	0.12264	0.1094	1.1207	0.264	0.1639
4 – 1	0.08276	0.5816	0.1423	0.887	0.1106
5 – 1	0.11806	0.1715	0.6886	0.492	0.1578
6 – 1	-0.0134	0.5731	-0.0234	0.981	-0.0179

Education:

2 – 1	0.40274	0.6431	0.6262	0.532	0.5382
3 – 1	0.29018	0.6175	0.47	0.639	0.3878
4 – 1	0.19909	0.6246	0.3187	0.75	0.266
5 – 1	0.24692	0.6238	0.3958	0.693	0.33
6 – 1	0.30978	0.6156	0.5032	0.615	0.414
7 – 1	0.24803	0.6448	0.3846	0.701	0.3314
8 – 1	0.05236	0.6501	0.0805	0.936	0.07
9 – 1	-0.19252	0.743	-0.2591	0.796	-0.2573

Ten_Field:

2 – 1	0.48637	0.2974	1.6352	0.104	0.6499
3 – 1	0.63856	0.3003	2.1266	0.035	0.8533
4 – 1	0.25458	0.3122	0.8155	0.416	0.3402
5 – 1	0.29085	0.3147	0.9242	0.357	0.3887
6 – 1	0.50767	0.3243	1.5655	0.119	0.6784
7 – 1	0.74635	0.3342	2.2334	0.027	0.9974
8 – 1	0.33278	0.3183	1.0454	0.297	0.4447

Employment status:

1 – 0	0.03101	0.2194	0.1414	0.888	0.0414
2 – 0	-0.00829	0.2562	-0.0324	0.974	-0.0111
3 – 0	0.01115	0.3669	0.0304	0.976	0.0149

Current Pos:

1 – 0	-0.08176	0.6993	-0.1169	0.907	-0.1093
2 – 0	-0.36796	0.2645	-1.3914	0.166	-0.4917
3 – 0	0.19079	0.1676	1.1386	0.256	0.255
4 – 0	0.05242	0.1463	0.3584	0.72	0.0701
5 – 0	-0.06671	0.2094	-0.3187	0.75	-0.0892
6 – 0	0.46716	0.4734	0.9868	0.325	0.6243

Ten-Posn:

	Estimate	SE	t	p	Stand. Estimate
2 – 1	-0.02949	0.1735	-0.1699	0.865	-0.0394
3 – 1	-0.036	0.1533	-0.2348	0.815	-0.0481
4 – 1	0.05281	0.1777	0.2972	0.767	0.0706
5 – 1	0.08003	0.1777	0.4503	0.653	0.1069
6 – 1	-0.11066	0.2231	-0.496	0.62	-0.1479
7 – 1	0.13591	0.1807	0.7522	0.453	0.1816
Hosp type:					
1 – 0	-0.21949	0.1242	-1.7666	0.079	-0.2933
2 – 0	1.09063	0.3513	3.1044	0.002	1.4574
3 – 0	0.2081	0.2247	0.9262	0.355	0.2781
4 – 0	-0.28494	0.2137	-1.3331	0.184	-0.3808
5 – 0	-0.12478	0.1434	-0.8704	0.385	-0.1667
Geog work:					
2 – 1	0.11417	0.0892	1.28	0.202	0.1526
3 – 1	0.09888	0.1135	0.8715	0.385	0.1321
Shift/week:					
2 – 1	0.23341	0.3714	0.6285	0.53	0.3119
3 – 1	0.02835	0.3144	0.0902	0.928	0.0379
4 – 1	0.14549	0.3109	0.468	0.64	0.1944
5 – 1	0.31685	0.4306	0.7358	0.463	0.4234
Shift time:					
2 – 1	-0.03543	0.1683	-0.2105	0.834	-0.0473
3 – 1	0.71545	0.2517	2.8426	0.005	0.9561
4 – 1	0.14759	0.104	1.4195	0.157	0.1972
Euth/shift:					
2 – 1	-0.04919	0.0923	-0.5326	0.595	-0.0657
3 – 1	-0.174	0.1184	-1.4701	0.143	-0.2325
4 – 1	-0.0511	0.1925	-0.2654	0.791	-0.0683
5 – 1	-0.05854	0.1708	-0.3428	0.732	-0.0782
POSS	0.06461	0.0402	1.6064	0.11	0.0934
SelfComp	-0.31766	0.0741	-4.2867	< .001	-0.2341
FOC-Mean	0.12469	0.0417	2.9877	0.003	0.1496
BO	0.75571	0.0917	8.2403	< .001	0.4999

Model 4

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept [a]	-1.96063	0.9617	-2.03874	0.043	
Age:					
2 – 1	0.06134	0.1225	0.50064	0.617	0.08197
3 – 1	0.06512	0.1435	0.45373	0.651	0.08703
4 – 1	-0.03578	0.1679	-0.21303	0.832	-0.04781
5 – 1	0.16765	0.1829	0.91668	0.36	0.22402
6 – 1	-0.0293	0.2123	-0.13803	0.89	-0.03915

7 – 1	0.30441	0.2406	1.26523	0.207	0.40678
8 – 1	-0.07793	0.2645	-0.2947	0.769	-0.10414
Gender:					
2 – 1	0.29355	0.1975	1.48632	0.139	0.39227
3 – 1	0.35035	0.408	0.85866	0.392	0.46818
4 – 1	0.48778	0.5409	0.90178	0.368	0.65182
5 – 1	-0.60967	0.5463	-1.11593	0.266	-0.8147
Race:					
1 – 0	0.40038	0.5998	0.66757	0.505	0.53503
2 – 0	0.72149	0.6435	1.12116	0.264	0.96413
3 – 0	0.29219	0.689	0.42409	0.672	0.39046
4 – 0	0.21048	0.6675	0.31535	0.753	0.28127
5 – 0	0.1592	0.6475	0.24587	0.806	0.21274
8 – 0	0.28724	0.6488	0.44272	0.658	0.38383
Income:					
2 – 1	-4.46e−4	0.189	-0.00236	0.998	-5.96e−4
3 – 1	-0.07535	0.2024	-0.37225	0.71	-0.10068
4 – 1	-0.10568	0.2125	-0.49733	0.62	-0.14122
5 – 1	-0.19182	0.236	-0.81277	0.417	-0.25633
6 – 1	-0.3278	0.2403	-1.36433	0.174	-0.43804
7 – 1	-0.25416	0.2421	-1.04982	0.295	-0.33963
8 – 1	-0.25774	0.2299	-1.12106	0.264	-0.34442
US Rgn:					
2 – 1	0.10016	0.1496	0.66947	0.504	0.13384
3 – 1	0.16003	0.1139	1.40511	0.162	0.21384
4 – 1	0.08164	0.1211	0.67395	0.501	0.1091
5 – 1	0.13231	0.1379	0.95946	0.339	0.1768
6 – 1	0.05287	0.1641	0.3221	0.748	0.07064
7 – 1	-0.01126	0.117	-0.09619	0.923	-0.01504
Marital:					
2 – 1	-0.03776	0.0972	-0.38851	0.698	-0.05046
3 – 1	0.12637	0.1041	1.21398	0.226	0.16887
4 – 1	0.3893	0.5572	0.69873	0.486	0.52023
5 – 1	0.09598	0.1632	0.58827	0.557	0.12826
6 – 1	-0.35086	0.5499	-0.63801	0.524	-0.46886
Education:					
2 – 1	0.22813	0.6129	0.3722	0.71	0.30485
3 – 1	0.22116	0.5875	0.37642	0.707	0.29554
4 – 1	0.16169	0.5942	0.27211	0.786	0.21607
5 – 1	0.19331	0.5935	0.3257	0.745	0.25831
6 – 1	0.22776	0.5858	0.38876	0.698	0.30435
7 – 1	0.28971	0.6134	0.47226	0.637	0.38714
8 – 1	-0.05622	0.6188	-0.09085	0.928	-0.07513

9 – 1	-0.13785	0.7069	-0.19502	0.846	-0.18421
Ten_Field:					
2 – 1	0.52829	0.2831	1.86624	0.064	0.70595
3 – 1	0.60848	0.2857	2.12974	0.034	0.81311
4 – 1	0.3067	0.2972	1.03211	0.303	0.40984
5 – 1	0.22732	0.2997	0.75855	0.449	0.30377
6 – 1	0.44623	0.3088	1.44523	0.15	0.5963
7 – 1	0.65237	0.3185	2.04804	0.042	0.87176
8 – 1	0.32587	0.3028	1.07613	0.283	0.43546
Employment status:					
1 – 0	0.03763	0.2087	0.18032	0.857	0.05028
2 – 0	-0.05895	0.244	-0.24162	0.809	-0.07877
3 – 0	0.00963	0.349	0.02758	0.978	0.01286
Current Pos:					
1 – 0	-0.08326	0.6652	-0.12517	0.901	-0.11127
2 – 0	-0.29364	0.2521	-1.16493	0.245	-0.39239
3 – 0	0.10783	0.1604	0.67226	0.502	0.14409
4 – 0	0.02791	0.1393	0.20045	0.841	0.0373
5 – 0	-0.06066	0.1991	-0.30458	0.761	-0.08106
6 – 0	0.44139	0.4504	0.98004	0.328	0.58982
Ten-Posn:					
2 – 1	-0.03471	0.1651	-0.21028	0.834	-0.04639
3 – 1	-0.01758	0.1459	-0.12051	0.904	-0.02349
4 – 1	0.03257	0.1691	0.19257	0.847	0.04352
5 – 1	0.12	0.1693	0.70892	0.479	0.16035
6 – 1	-0.01574	0.2132	-0.07383	0.941	-0.02104
7 – 1	0.10551	0.172	0.61341	0.54	0.14099
Hosp type:					
1 – 0	-0.15817	0.1189	-1.33009	0.185	-0.21137
2 – 0	0.75758	0.3418	2.21659	0.028	1.01236
3 – 0	0.22854	0.2138	1.06914	0.286	0.3054
4 – 0	-0.34444	0.2037	-1.69076	0.092	-0.46028
5 – 0	-0.09084	0.1366	-0.66517	0.507	-0.12139
Geog work:					
2 – 1	0.12616	0.0849	1.48612	0.139	0.16858
3 – 1	0.07306	0.1081	0.67603	0.5	0.09763
Shift/week:					
2 – 1	0.07925	0.3548	0.22333	0.824	0.1059
3 – 1	-0.15193	0.3016	-0.50375	0.615	-0.20303
4 – 1	-0.04161	0.2984	-0.13942	0.889	-0.0556
5 – 1	0.07997	0.4128	0.19374	0.847	0.10686
Shift time:					

2 – 1		-0.13616	0.1616	-0.84261	0.4	-0.18195
3 – 1		0.59966	0.2407	2.49123	0.014	0.80132
4 – 1		0.09198	0.0996	0.92326	0.357	0.12291
Euth/shift:						
2 – 1		-0.03746	0.0879	-0.42627	0.67	-0.05006
3 – 1		-0.13469	0.1129	-1.1929	0.234	-0.17999
4 – 1		0.00319	0.1835	0.01737	0.986	0.00426
5 – 1		-0.03847	0.1625	-0.23673	0.813	-0.05141
POSS		0.04162	0.0386	1.07887	0.282	0.06017
SelfComp		-0.25556	0.0717	-3.562	< .001	-0.18833
FOC-Mean		0.08042	0.0408	1.96972	0.05	0.09648
BO		0.55726	0.0971	5.73753	< .001	0.36861
STS		0.33234	0.0715	4.64835	< .001	0.2872

[a] Represents reference level

Hypothesis 3

Model Coefficients: Effects of Compassion Satisfaction, Burnout, Secondary Traumatic Stress on Anxiety

	Predictor	Estimate	SE	t	p	Stand. Estimate
Model 1	Intercept [a]	0.53218	1.317	0.40407	0.687	
	Age:					
	2 – 1	0.11691	0.184	0.63523	0.526	0.14789
	3 – 1	-0.12859	0.216	-0.59552	0.552	-0.16268
	4 – 1	-0.20707	0.252	-0.82117	0.413	-0.26196
	5 – 1	0.13487	0.274	0.49204	0.623	0.17062
	6 – 1	0.09137	0.32	0.28526	0.776	0.11559
	7 – 1	-0.20049	0.359	-0.5587	0.577	-0.25364
	8 – 1	-0.75687	0.395	-1.91521	0.057	-0.95749
	Gender:					
	2 – 1	-0.11553	0.295	-0.39198	0.695	-0.14615
	3 – 1	0.78508	0.607	1.29426	0.197	0.99318
	4 – 1	-0.03467	0.798	-0.04346	0.965	-0.04385
	5 – 1	-0.07992	0.822	-0.09719	0.923	-0.1011
	Race:					
	1 – 0	1.21954	0.896	1.36177	0.175	1.54281
	2 – 0	1.08262	0.956	1.13281	0.259	1.3696
	3 – 0	0.77472	1.034	0.74942	0.454	0.98008
	4 – 0	1.31215	1	1.31196	0.191	1.65997

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5 – 0	1.56628	0.961	1.62994	0.105	1.98146
8 – 0	1.43485	0.97	1.4794	0.141	1.8152
Income:					
2 – 1	0.2437	0.284	0.85711	0.392	0.3083
3 – 1	0.10463	0.305	0.34351	0.732	0.13237
4 – 1	-0.04784	0.32	-0.1496	0.881	-0.06052
5 – 1	-0.08408	0.353	-0.23811	0.812	-0.10637
6 – 1	-0.02267	0.362	-0.0627	0.95	-0.02867
7 – 1	-0.40341	0.363	-1.11194	0.267	-0.51034
8 – 1	0.06865	0.346	0.19859	0.843	0.08684
US Rgn:					
2 – 1	0.1379	0.224	0.61574	0.539	0.17446
3 – 1	0.28636	0.17	1.68084	0.094	0.36227
4 – 1	0.13605	0.18	0.75508	0.451	0.17212
5 – 1	0.15839	0.206	0.7687	0.443	0.20037
6 – 1	0.40485	0.242	1.6737	0.096	0.51216
7 – 1	0.06581	0.176	0.37473	0.708	0.08325
Marital:					
2 – 1	0.0113	0.145	0.0779	0.938	0.01429
3 – 1	0.33347	0.155	2.14865	0.033	0.42186
4 – 1	-0.76689	0.829	-0.92528	0.356	-0.97018
5 – 1	0.03224	0.245	0.13144	0.896	0.04079
6 – 1	0.55747	0.814	0.68523	0.494	0.70525
Education:					
2 – 1	-1.2203	0.913	-1.33672	0.183	-1.54376
3 – 1	-1.34269	0.873	-1.53803	0.126	-1.6986
4 – 1	-1.7111	0.883	-1.93787	0.054	-2.16467
5 – 1	-1.5362	0.883	-1.73995	0.083	-1.94341
6 – 1	-1.45804	0.872	-1.67197	0.096	-1.84453
7 – 1	-1.43292	0.91	-1.575	0.117	-1.81275
8 – 1	-1.26252	0.924	-1.36616	0.173	-1.59718
9 – 1	-1.76569	1.058	-1.6691	0.097	-2.23373
Ten_Field:					
2 – 1	0.41531	0.425	0.9782	0.329	0.5254
3 – 1	0.74175	0.427	1.73536	0.084	0.93837
4 – 1	0.58821	0.438	1.34219	0.181	0.74413
5 – 1	1.11764	0.444	2.51715	0.013	1.4139
6 – 1	0.74965	0.462	1.62203	0.106	0.94837
7 – 1	1.17633	0.473	2.48794	0.014	1.48814
8 – 1	0.5753	0.451	1.27679	0.203	0.7278
Employment status:					
1 – 0	-0.21171	0.313	-0.67696	0.499	-0.26782

	Estimate	SE	t	p		Stand. Estimate
2 – 0	-0.04357	0.363	-0.12014	0.904		-0.05512
3 – 0	0.57841	0.514	1.12442	0.262		0.73173
Current Pos:						
1 – 0	-0.16012	1	-0.16012	0.873		-0.20256
2 – 0	0.00327	0.371	0.00881	0.993		0.00413
3 – 0	0.09349	0.237	0.395	0.693		0.11827
4 – 0	-0.08497	0.208	-0.40841	0.683		-0.10749
5 – 0	0.09275	0.297	0.31177	0.756		0.11733
6 – 0	0.06683	0.669	0.09994	0.92		0.08454
Ten-Posn:						
2 – 1	0.28414	0.247	1.15083	0.251		0.35946
3 – 1	0.25383	0.218	1.1659	0.245		0.32112
4 – 1	0.12675	0.25	0.50705	0.613		0.16034
5 – 1	-0.0225	0.255	-0.08831	0.93		-0.02847
6 – 1	0.29223	0.319	0.91712	0.36		0.3697
7 – 1	0.18179	0.259	0.70147	0.484		0.22997
Hosp type:						
1 – 0	-0.13099	0.175	-0.74716	0.456		-0.16572
2 – 0	0.67566	0.502	1.34462	0.18		0.85476
3 – 0	0.31299	0.322	0.97156	0.332		0.39596
4 – 0	0.16583	0.306	0.54264	0.588		0.20979
5 – 0	-0.09215	0.203	-0.45479	0.65		-0.11657
Geog work:						
2 – 1	0.03068	0.128	0.24037	0.81		0.03881
3 – 1	0.19737	0.162	1.22149	0.223		0.24969
Shift/week:						
2 – 1	0.22721	0.517	0.4393	0.661		0.28743
3 – 1	0.52079	0.439	1.18641	0.237		0.65884
4 – 1	0.66588	0.435	1.5313	0.127		0.84239
5 – 1	0.76481	0.596	1.28323	0.201		0.96754
Shift time:						
2 – 1	0.35082	0.236	1.48365	0.139		0.44382
3 – 1	0.32171	0.359	0.89567	0.372		0.40699
4 – 1	-0.0929	0.148	-0.62792	0.531		-0.11752
Euth/shift:						
2 – 1	-0.06318	0.127	-0.49654	0.62		-0.07993
3 – 1	0.31372	0.163	1.91965	0.056		0.39688
4 – 1	0.31679	0.273	1.1601	0.247		0.40077
5 – 1	0.1031	0.243	0.42457	0.672		0.13043
Predictor	**Estimate**	**SE**	**t**	**p**	**Stand. Estimate**	
Model 2	Intercept [a]	2.14415	1.1953	1.7939	0.074	

Age:

2 – 1	0.06977	0.1595	0.4373	0.662	0.08826
3 – 1	-0.09113	0.1875	-0.486	0.628	-0.11528
4 – 1	-0.24088	0.2196	-1.0971	0.274	-0.30474
5 – 1	-0.02821	0.2387	-0.1182	0.906	-0.03569
6 – 1	0.08702	0.2775	0.3136	0.754	0.11008
7 – 1	-0.12961	0.3112	-0.4165	0.678	-0.16397
8 – 1	-0.76623	0.344	-2.2274	0.027	-0.96934

Gender:

2 – 1	-0.16937	0.2582	-0.6559	0.513	-0.21427
3 – 1	0.90816	0.5278	1.7207	0.087	1.14889
4 – 1	-0.82327	0.7027	-1.1715	0.243	-1.0415
5 – 1	0.2141	0.7134	0.3001	0.764	0.27085

Race:

1 – 0	1.07286	0.7779	1.3792	0.169	1.35724
2 – 0	1.14458	0.8303	1.3785	0.17	1.44797
3 – 0	0.86547	0.8983	0.9635	0.336	1.09489
4 – 0	1.25603	0.8661	1.4501	0.149	1.58897
5 – 0	1.37891	0.8368	1.6477	0.101	1.74443
8 – 0	0.95095	0.844	1.1267	0.261	1.20302

Income:

2 – 1	0.19719	0.247	0.7985	0.426	0.24946
3 – 1	-0.03252	0.2646	-0.1229	0.902	-0.04114
4 – 1	-0.1156	0.2775	-0.4165	0.677	-0.14624
5 – 1	-0.31193	0.3073	-1.0151	0.311	-0.39462
6 – 1	-0.13815	0.3141	-0.4398	0.661	-0.17477
7 – 1	-0.3624	0.315	-1.1503	0.251	-0.45846
8 – 1	-0.12186	0.3004	-0.4057	0.685	-0.15417

US Rgn:

2 – 1	0.20568	0.1949	1.0552	0.293	0.2602
3 – 1	0.17449	0.1483	1.1764	0.241	0.22074
4 – 1	-0.04874	0.1577	-0.309	0.758	-0.06165
5 – 1	0.1075	0.1798	0.5978	0.551	0.13599
6 – 1	0.18999	0.2117	0.8976	0.371	0.24036
7 – 1	0.01423	0.1527	0.0932	0.926	0.018

Marital:

2 – 1	0.16037	0.127	1.2626	0.208	0.20288
3 – 1	0.32698	0.1347	2.4275	0.016	0.41366
4 – 1	-0.3833	0.7231	-0.5301	0.597	-0.48491
5 – 1	0.09867	0.2131	0.463	0.644	0.12482
6 – 1	0.05351	0.7128	0.0751	0.94	0.06769

Education:

2 – 1	-0.89046	0.7939	-1.1216	0.263	-1.12649

3 – 1	-0.83861	0.7639	-1.0978	0.274	-1.06091
4 – 1	-1.19716	0.7709	-1.553	0.122	-1.5145
5 – 1	-1.00138	0.7712	-1.2985	0.196	-1.26682
6 – 1	-0.99555	0.7607	-1.3088	0.192	-1.25945
7 – 1	-0.83335	0.797	-1.0457	0.297	-1.05425
8 – 1	-0.9331	0.8046	-1.1597	0.248	-1.18044
9 – 1	-1.23524	0.9194	-1.3435	0.181	-1.56266
Ten_Field:					
2 – 1	0.5232	0.3687	1.4191	0.157	0.66188
3 – 1	0.665	0.3709	1.793	0.075	0.84127
4 – 1	0.60484	0.3806	1.5892	0.114	0.76517
5 – 1	0.82387	0.3866	2.131	0.034	1.04225
6 – 1	0.6832	0.4004	1.7062	0.09	0.8643
7 – 1	1.09506	0.4098	2.672	0.008	1.38534
8 – 1	0.48903	0.3913	1.2497	0.213	0.61866
Employment status:					
1 – 0	-0.14176	0.2722	-0.5208	0.603	-0.17933
2 – 0	-0.01029	0.3171	-0.0325	0.974	-0.01302
3 – 0	0.37438	0.455	0.8228	0.412	0.47362
Current Pos:					
1 – 0	-0.5853	0.8682	-0.6741	0.501	-0.74045
2 – 0	-0.44561	0.3272	-1.362	0.175	-0.56373
3 – 0	-0.14049	0.2078	-0.676	0.5	-0.17773
4 – 0	-0.17949	0.1807	-0.9933	0.322	-0.22706
5 – 0	-0.1379	0.2598	-0.5307	0.596	-0.17445
6 – 0	0.20608	0.5883	0.3503	0.726	0.2607
Ten-Posn:					
2 – 1	0.15333	0.2158	0.7106	0.478	0.19398
3 – 1	0.15776	0.1907	0.8273	0.409	0.19958
4 – 1	0.08606	0.2205	0.3903	0.697	0.10888
5 – 1	0.01106	0.221	0.0501	0.96	0.014
6 – 1	0.22235	0.2767	0.8036	0.423	0.28129
7 – 1	0.20622	0.2247	0.9176	0.36	0.26089
Hosp type:					
1 – 0	-0.17488	0.1545	-1.132	0.259	-0.22124
2 – 0	0.7594	0.4365	1.7398	0.083	0.9607
3 – 0	0.30641	0.2793	1.0972	0.274	0.38764
4 – 0	0.06895	0.2656	0.2596	0.795	0.08722
5 – 0	-0.00257	0.1778	-0.0145	0.988	-0.00325
Geog work:					
2 – 1	0.04248	0.1109	0.383	0.702	0.05374
3 – 1	0.11451	0.1409	0.8128	0.417	0.14486

Predictor	Estimate	SE	t	p	Stand. Estimate
Shift/week:					
2 – 1	-0.3093	0.4602	-0.6721	0.502	-0.39129
3 – 1	0.09628	0.3909	0.2463	0.806	0.1218
4 – 1	0.20943	0.3864	0.542	0.588	0.26495
5 – 1	-0.0644	0.5347	-0.1204	0.904	-0.08146
Shift time:					
2 – 1	0.29279	0.2076	1.4106	0.16	0.3704
3 – 1	0.3615	0.3129	1.1554	0.249	0.45733
4 – 1	-0.02657	0.1291	-0.2058	0.837	-0.03362
Euth/shift:					
2 – 1	-0.07096	0.1134	-0.6255	0.532	-0.08978
3 – 1	0.21638	0.1428	1.5152	0.131	0.27373
4 – 1	0.18266	0.2383	0.7666	0.444	0.23107
5 – 1	-0.08234	0.2124	-0.3877	0.699	-0.10416
POSS	-0.02266	0.0464	-0.4888	0.625	-0.03101
FOC-Mean	0.14559	0.0519	2.8044	0.006	0.16535
SelfComp	-0.57776	0.0862	-6.7005	< .001	-0.40309

	Predictor	Estimate	SE	t	p	Stand. Estimate
Model 3	Intercept [a]	3.38376	1.195	2.83168	0.005	
	Age:					
	2 – 1	0.06461	0.1539	0.41979	0.675	0.08174
	3 – 1	-0.03152	0.1815	-0.1736	0.862	-0.03987
	4 – 1	-0.21754	0.2119	-1.02654	0.306	-0.27521
	5 – 1	-0.01007	0.2303	-0.04372	0.965	-0.01274
	6 – 1	0.12412	0.2679	0.46331	0.644	0.15702
	7 – 1	-0.09411	0.3004	-0.31331	0.754	-0.11906
	8 – 1	-0.75052	0.3319	-2.26129	0.025	-0.94946
	Gender:					
	2 – 1	-0.24989	0.25	-0.99969	0.319	-0.31612
	3 – 1	1.04033	0.5103	2.03873	0.043	1.31609
	4 – 1	-0.63133	0.6797	-0.92881	0.354	-0.79868
	5 – 1	-0.08572	0.6924	-0.12381	0.902	-0.10845
	Race:					
	1 – 0	0.92648	0.7514	1.233	0.219	1.17207
	2 – 0	0.93222	0.8028	1.16119	0.247	1.17933
	3 – 0	0.94114	0.8668	1.08574	0.279	1.19061
	4 – 0	1.06002	0.8371	1.2663	0.207	1.341
	5 – 0	1.16516	0.8092	1.43994	0.151	1.47401
	8 – 0	0.80383	0.8151	0.98616	0.325	1.01691
	Income:					
	2 – 1	0.19965	0.2383	0.83796	0.403	0.25258
	3 – 1	-0.11977	0.2562	-0.46753	0.641	-0.15152

4 – 1	-0.14002	0.2678	-0.52284	0.602	-0.17714
5 – 1	-0.34245	0.2966	-1.15475	0.25	-0.43323
6 – 1	-0.24252	0.3042	-0.79732	0.426	-0.30681
7 – 1	-0.34102	0.304	-1.12181	0.263	-0.43142
8 – 1	-0.20474	0.2906	-0.70465	0.482	-0.25901
US Rgn:					
2 – 1	0.18585	0.1881	0.98791	0.324	0.23512
3 – 1	0.19487	0.1432	1.36088	0.175	0.24653
4 – 1	-0.03632	0.1522	-0.23862	0.812	-0.04595
5 – 1	0.14893	0.1738	0.85689	0.393	0.18841
6 – 1	0.14601	0.2045	0.71391	0.476	0.18471
7 – 1	0.02194	0.1473	0.14894	0.882	0.02776
Marital:					
2 – 1	0.16461	0.1225	1.34331	0.181	0.20825
3 – 1	0.29072	0.1303	2.2316	0.027	0.36778
4 – 1	-0.0338	0.7032	-0.04807	0.962	-0.04276
5 – 1	0.09524	0.2056	0.46329	0.644	0.12049
6 – 1	-0.05625	0.6882	-0.08174	0.935	-0.07117
Education:					
2 – 1	-0.76293	0.7666	-0.99521	0.321	-0.96516
3 – 1	-0.77292	0.7372	-1.04851	0.296	-0.9778
4 – 1	-1.07982	0.7443	-1.45076	0.148	-1.36605
5 – 1	-0.88063	0.7447	-1.18259	0.238	-1.11406
6 – 1	-0.89085	0.7343	-1.21313	0.227	-1.12699
7 – 1	-0.6684	0.77	-0.86805	0.386	-0.84558
8 – 1	-0.91256	0.7763	-1.17555	0.241	-1.15445
9 – 1	-1.25028	0.887	-1.40955	0.16	-1.5817
Ten_Field:					
2 – 1	0.30608	0.3599	0.85049	0.396	0.38722
3 – 1	0.51455	0.3598	1.42996	0.154	0.65094
4 – 1	0.37318	0.3718	1.00362	0.317	0.4721
5 – 1	0.58663	0.3778	1.55287	0.122	0.74213
6 – 1	0.50033	0.3891	1.28595	0.2	0.63295
7 – 1	0.86977	0.3995	2.17732	0.031	1.10032
8 – 1	0.26447	0.3818	0.69276	0.489	0.33457
Employment status:					
1 – 0	-0.2179	0.2633	-0.82761	0.409	-0.27566
2 – 0	-0.10393	0.3068	-0.33875	0.735	-0.13148
3 – 0	0.23736	0.4404	0.53902	0.59	0.30028
Current Pos:					
1 – 0	-0.62053	0.8377	-0.74077	0.46	-0.78501
2 – 0	-0.49097	0.3159	-1.55443	0.122	-0.62111

	Estimate	SE	t	p		Stand. Estimate
3 – 0	-0.06512	0.2014	-0.32334	0.747		-0.08238
4 – 0	-0.15094	0.1745	-0.86509	0.388		-0.19095
5 – 0	-0.10501	0.2508	-0.41868	0.676		-0.13284
6 – 0	0.10509	0.5681	0.18498	0.853		0.13295
Ten-Posn:						
2 – 1	0.18021	0.2083	0.86521	0.388		0.22798
3 – 1	0.16824	0.184	0.91435	0.362		0.21283
4 – 1	0.18754	0.2143	0.87523	0.383		0.23725
5 – 1	0.08254	0.214	0.38573	0.7		0.10442
6 – 1	0.16268	0.2674	0.60842	0.544		0.2058
7 – 1	0.28232	0.2177	1.29704	0.196		0.35716
Hosp type:						
1 – 0	-0.19178	0.1491	-1.28617	0.2		-0.24262
2 – 0	0.95337	0.424	2.24874	0.026		1.20609
3 – 0	0.23921	0.27	0.88605	0.377		0.30262
4 – 0	0.00254	0.2568	0.00988	0.992		0.00321
5 – 0	0.01447	0.1715	0.08434	0.933		0.0183
Geog work:						
2 – 1	0.07641	0.1073	0.71182	0.477		0.09666
3 – 1	0.08282	0.1361	0.60831	0.544		0.10477
Shift/week:						
2 – 1	-0.27095	0.4441	-0.61016	0.542		-0.34277
3 – 1	0.0385	0.3774	0.10201	0.919		0.0487
4 – 1	0.13822	0.3732	0.37035	0.712		0.17486
5 – 1	-0.35286	0.521	-0.67728	0.499		-0.44639
Shift time:						
2 – 1	0.35388	0.2009	1.76193	0.08		0.44769
3 – 1	0.48287	0.3034	1.59142	0.113		0.61087
4 – 1	-0.00198	0.1247	-0.01589	0.987		-0.00251
Euth/shift:						
2 – 1	-0.1382	0.1108	-1.24775	0.214		-0.17484
3 – 1	0.1104	0.1404	0.78658	0.432		0.13966
4 – 1	0.05132	0.2323	0.22097	0.825		0.06493
5 – 1	-0.05	0.2051	-0.24383	0.808		-0.06325
POSS	0.03873	0.0473	0.81824	0.414		0.05301
FOC-Mean	0.14816	0.0501	2.95797	0.003		0.16828
SelfComp	-0.53872	0.0838	-6.43085	< .001		-0.37585
CS	-0.32465	0.0821	-3.9562	< .001		-0.24555

Model Coefficients - ANX

	Predictor	Estimate	SE	t	p	Stand. Estimate
Model 4	Intercept [a]	-0.04921	1.2688	-0.03878	0.969	

Age:

2 – 1	0.01456	0.1435	0.10151	0.919	0.01842
3 – 1	-0.11985	0.1696	-0.70661	0.481	-0.15162
4 – 1	-0.21815	0.1971	-1.10655	0.27	-0.27597
5 – 1	-2.12e−4	0.2143	-9.92e−4	0.999	-2.69e−4
6 – 1	0.08194	0.2493	0.32866	0.743	0.10366
7 – 1	-0.10297	0.2794	-0.36847	0.713	-0.13026
8 – 1	-0.62345	0.3096	-2.01385	0.045	-0.78871

Gender:

2 – 1	-0.19411	0.2327	-0.834	0.405	-0.24556
3 – 1	0.71481	0.4782	1.4947	0.137	0.90428
4 – 1	-0.70602	0.6325	-1.11631	0.266	-0.89317
5 – 1	0.22073	0.6464	0.34147	0.733	0.27924

Race:

1 – 0	0.45369	0.7041	0.64439	0.52	0.57395
2 – 0	0.29227	0.7555	0.38686	0.699	0.36974
3 – 0	0.45954	0.8109	0.56669	0.572	0.58135
4 – 0	0.64359	0.7822	0.82274	0.412	0.81418
5 – 0	0.57463	0.7601	0.75603	0.451	0.72694
8 – 0	0.41424	0.7614	0.54403	0.587	0.52405

Income:

2 – 1	0.2348	0.2217	1.05892	0.291	0.29704
3 – 1	-0.07455	0.2385	-0.31263	0.755	-0.09431
4 – 1	-0.05446	0.2496	-0.21817	0.828	-0.06889
5 – 1	-0.17872	0.2774	-0.64425	0.52	-0.2261
6 – 1	-0.14971	0.2834	-0.52817	0.598	-0.18939
7 – 1	-0.18471	0.2842	-0.65003	0.516	-0.23368
8 – 1	-0.15226	0.2705	-0.56298	0.574	-0.19262

US Rgn:

2 – 1	0.10821	0.1756	0.61641	0.538	0.1369
3 – 1	0.11212	0.134	0.83656	0.404	0.14184
4 – 1	-0.06285	0.1417	-0.44358	0.658	-0.0795
5 – 1	0.07885	0.1622	0.48626	0.627	0.09975
6 – 1	-0.02929	0.1928	-0.15194	0.879	-0.03706
7 – 1	-0.03945	0.1375	-0.28687	0.775	-0.0499

Marital:

2 – 1	0.14835	0.114	1.30093	0.195	0.18767
3 – 1	0.20406	0.1222	1.67035	0.096	0.25816
4 – 1	-0.20413	0.6548	-0.31174	0.756	-0.25825
5 – 1	0.04685	0.1914	0.24471	0.807	0.05926
6 – 1	0.00415	0.6403	0.00648	0.995	0.00525

Education:

2 – 1	-0.28181	0.7183	-0.39235	0.695	-0.35652

3 – 1	-0.34956	0.6899	-0.50668	0.613	-0.44221
4 – 1	-0.59844	0.6977	-0.85773	0.392	-0.75707
5 – 1	-0.46952	0.6966	-0.67404	0.501	-0.59398
6 – 1	-0.45255	0.6876	-0.65819	0.511	-0.57251
7 – 1	-0.26681	0.7199	-0.37064	0.711	-0.33754
8 – 1	-0.44681	0.7269	-0.61468	0.539	-0.56525
9 – 1	-0.67031	0.8316	-0.80606	0.421	-0.84799
Ten_Field:					
2 – 1	0.30892	0.3348	0.92273	0.357	0.39081
3 – 1	0.37998	0.3356	1.13225	0.259	0.4807
4 – 1	0.11119	0.349	0.31855	0.75	0.14066
5 – 1	0.42291	0.3526	1.1993	0.232	0.53502
6 – 1	0.36644	0.3627	1.01025	0.314	0.46358
7 – 1	0.64695	0.3737	1.73108	0.085	0.81844
8 – 1	0.09492	0.3564	0.26631	0.79	0.12008
Employment status:					
1 – 0	-0.26691	0.2451	-1.08905	0.277	-0.33766
2 – 0	-0.21618	0.2861	-0.75559	0.451	-0.27348
3 – 0	0.14821	0.41	0.36152	0.718	0.18749
Current Pos:					
1 – 0	-0.27321	0.7817	-0.34949	0.727	-0.34563
2 – 0	-0.24593	0.2971	-0.82789	0.409	-0.31111
3 – 0	-0.03434	0.1874	-0.18322	0.855	-0.04344
4 – 0	-0.04673	0.1634	-0.28603	0.775	-0.05911
5 – 0	-0.02894	0.2337	-0.12382	0.902	-0.03661
6 – 0	0.35322	0.5303	0.66603	0.506	0.44685
Ten-Posn:					
2 – 1	0.191	0.1938	0.98572	0.325	0.24163
3 – 1	0.16265	0.1712	0.95022	0.343	0.20576
4 – 1	0.19466	0.1993	0.97652	0.33	0.24626
5 – 1	0.04349	0.1992	0.21835	0.827	0.05502
6 – 1	0.08543	0.2491	0.34291	0.732	0.10807
7 – 1	0.20173	0.203	0.99378	0.322	0.25521
Hosp type:					
1 – 0	-0.1542	0.1389	-1.11034	0.268	-0.19507
2 – 0	0.90823	0.3945	2.30239	0.022	1.14898
3 – 0	0.35762	0.252	1.41894	0.158	0.45241
4 – 0	-0.0063	0.2389	-0.02636	0.979	-0.00797
5 – 0	0.0854	0.1601	0.53349	0.594	0.10804
Geog work:					
2 – 1	0.02768	0.1002	0.27617	0.783	0.03502
3 – 1	0.05998	0.1267	0.47335	0.636	0.07588

	Predictor	Estimate	SE	t	p		Stand. Estimate
	Shift/week:						
	2 – 1	-0.05931	0.4148	-0.14298	0.886		-0.07503
	3 – 1	0.01696	0.3511	0.0483	0.962		0.02146
	4 – 1	0.11629	0.3472	0.33492	0.738		0.14712
	5 – 1	-0.28817	0.4848	-0.59442	0.553		-0.36456
	Shift time:						
	2 – 1	0.13451	0.1909	0.70464	0.482		0.17016
	3 – 1	0.31568	0.2838	1.11222	0.267		0.39936
	4 – 1	-0.06572	0.1166	-0.56364	0.574		-0.08314
	Euth/shift:						
	2 – 1	-0.18812	0.1034	-1.819	0.07		-0.23799
	3 – 1	-0.01342	0.1324	-0.10138	0.919		-0.01698
	4 – 1	0.02171	0.2161	0.10046	0.92		0.02747
	5 – 1	-0.10817	0.191	-0.56624	0.572		-0.13684
	POSS	0.09884	0.0453	2.18101	0.03		0.13527
	FOC-Mean	0.14622	0.0466	3.13792	0.002		0.16607
	SelfComp	-0.37616	0.0831	-4.52448	< .001		-0.26244
	CS	-0.04157	0.0915	-0.45433	0.65		-0.03144
	BO	0.6886	0.1227	5.61157	< .001		0.43122

	Predictor	**Estimate**	**SE**	**t**	**p**		**Stand. Estimate**
Model 5	Intercept [a]	0.3954	1.2092	0.32697	0.744		
	Age:						
	2 – 1	-0.0299	0.1366	-0.21887	0.827		-0.0378
	3 – 1	-0.0811	0.1614	-0.50262	0.616		-0.1026
	4 – 1	-0.2162	0.1873	-1.1544	0.25		-0.2735
	5 – 1	-0.0548	0.2039	-0.26867	0.788		-0.0693
	6 – 1	0.0714	0.2369	0.30156	0.763		0.0904
	7 – 1	0.0924	0.2687	0.34396	0.731		0.1169
	8 – 1	-0.5243	0.2949	-1.77802	0.077		-0.6633
	Gender:						
	2 – 1	-0.2065	0.2211	-0.93374	0.352		-0.2612
	3 – 1	0.4847	0.457	1.06054	0.29		0.6131
	4 – 1	-0.9842	0.6038	-1.62997	0.105		-1.2451
	5 – 1	0.2882	0.6143	0.46907	0.64		0.3645
	Race:						
	1 – 0	0.4543	0.6689	0.67918	0.498		0.5748
	2 – 0	0.3301	0.7178	0.4599	0.646		0.4176
	3 – 0	0.4925	0.7705	0.63919	0.523		0.623
	4 – 0	0.4613	0.7442	0.61982	0.536		0.5836
	5 – 0	0.5952	0.7221	0.82427	0.411		0.753

8 – 0	0.4466	0.7235	0.61726	0.538	0.5649
Income:					
2 – 1	0.2032	0.2108	0.96386	0.336	0.257
3 – 1	-0.0721	0.2266	-0.31835	0.751	-0.0912
4 – 1	-0.032	0.2372	-0.13475	0.893	-0.0404
5 – 1	-0.1293	0.2638	-0.49019	0.625	-0.1636
6 – 1	-0.1499	0.2693	-0.55654	0.578	-0.1896
7 – 1	-0.24	0.2702	-0.88813	0.376	-0.3036
8 – 1	-0.1261	0.257	-0.49045	0.624	-0.1595
US Rgn:					
2 – 1	0.0906	0.1668	0.54295	0.588	0.1146
3 – 1	0.1555	0.1277	1.2179	0.225	0.1967
4 – 1	4.30E-04	0.1353	0.00318	0.997	5.44E-04
5 – 1	0.044	0.1542	0.2853	0.776	0.0557
6 – 1	-0.016	0.1832	-0.08712	0.931	-0.0202
7 – 1	-0.0196	0.1307	-0.14986	0.881	-0.0248
Marital:					
2 – 1	0.166	0.1084	1.53154	0.127	0.21
3 – 1	0.2097	0.1161	1.80669	0.072	0.2653
4 – 1	0.2315	0.629	0.368	0.713	0.2928
5 – 1	0.0254	0.1819	0.13941	0.889	0.0321
6 – 1	-0.4111	0.6148	-0.66876	0.504	-0.5201
Education:					
2 – 1	-0.5045	0.6841	-0.73744	0.462	-0.6382
3 – 1	-0.4568	0.6559	-0.69653	0.487	-0.5779
4 – 1	-0.665	0.663	-1.00296	0.317	-0.8413
5 – 1	-0.5474	0.662	-0.82689	0.409	-0.6925
6 – 1	-0.5688	0.6537	-0.8701	0.385	-0.7196
7 – 1	-0.2257	0.684	-0.32993	0.742	-0.2855
8 – 1	-0.6122	0.6915	-0.88536	0.377	-0.7745
9 – 1	-0.6653	0.7901	-0.8421	0.401	-0.8417
Ten_Field:					
2 – 1	0.3157	0.3181	0.99257	0.322	0.3994
3 – 1	0.3296	0.319	1.03301	0.303	0.4169
4 – 1	0.1521	0.3317	0.45864	0.647	0.1925
5 – 1	0.3203	0.3358	0.95389	0.341	0.4052
6 – 1	0.2737	0.3452	0.79287	0.429	0.3462
7 – 1	0.5171	0.3562	1.45195	0.148	0.6542
8 – 1	0.0605	0.3387	0.17849	0.859	0.0765
Employment status:					
1 – 0	-0.2691	0.2329	-1.15559	0.249	-0.3404
2 – 0	-0.2816	0.2722	-1.03469	0.302	-0.3563

3 – 0	0.1289	0.3895	0.33095	0.741	0.1631
Current Pos:					
1 – 0	-0.3146	0.7428	-0.42362	0.672	-0.398
2 – 0	-0.1922	0.2825	-0.68053	0.497	-0.2432
3 – 0	-0.1185	0.179	-0.66223	0.509	-0.1499
4 – 0	-0.0794	0.1554	-0.51132	0.61	-0.1005
5 – 0	-0.0229	0.222	-0.10335	0.918	-0.029
6 – 0	0.2808	0.5041	0.55697	0.578	0.3552
Ten-Posn:					
2 – 1	0.1891	0.1841	1.02695	0.306	0.2392
3 – 1	0.1864	0.1627	1.14552	0.253	0.2358
4 – 1	0.1899	0.1894	1.0028	0.317	0.2403
5 – 1	0.1068	0.1897	0.56295	0.574	0.1351
6 – 1	0.1908	0.2377	0.80243	0.423	0.2413
7 – 1	0.1888	0.1929	0.9789	0.329	0.2389
Hosp type:					
1 – 0	-0.0903	0.1326	-0.68115	0.497	-0.1143
2 – 0	0.5657	0.3818	1.48164	0.14	0.7157
3 – 0	0.3571	0.2395	1.49152	0.137	0.4518
4 – 0	-0.0866	0.2276	-0.38042	0.704	-0.1095
5 – 0	0.121	0.1523	0.79448	0.428	0.1531
Geog work:					
2 – 1	0.0526	0.0954	0.55105	0.582	0.0665
3 – 1	0.0264	0.1206	0.21888	0.827	0.0334
Shift/week:					
2 – 1	-0.2497	0.3962	-0.63029	0.529	-0.3159
3 – 1	-0.1996	0.3368	-0.59269	0.554	-0.2525
4 – 1	-0.1106	0.3334	-0.33186	0.74	-0.14
5 – 1	-0.6219	0.4661	-1.33444	0.184	-0.7868
Shift time:					
2 – 1	0.0509	0.1822	0.27954	0.78	0.0644
3 – 1	0.2212	0.2704	0.81815	0.414	0.2799
4 – 1	-0.119	0.1114	-1.06899	0.286	-0.1506
Euth/shift:					
2 – 1	-0.1826	0.0983	-1.85854	0.065	-0.231
3 – 1	0.0235	0.1261	0.18652	0.852	0.0297
4 – 1	0.0621	0.2055	0.30227	0.763	0.0786
5 – 1	-0.0734	0.1817	-0.40401	0.687	-0.0928
POSS	0.0783	0.0433	1.80916	0.072	0.1072
FOC-Mean	0.0959	0.0456	2.10516	0.037	0.1089
SelfComp	-0.3127	0.0801	-3.90157	< .001	-0.2181
CS	-0.1301	0.089	-1.46253	0.145	-0.0984

		Estimate	SE	t	p		Stand. Estimate
	BO	0.3946	0.1324	2.98096	0.003		0.2471
	STS	0.3828	0.0816	4.69271	< .001		0.3132

ᵃ Represents reference level

Hypothesis 4: Preliminary Testing

Model Coefficients, Effects of Compassion Satisfaction,
Burnout, and Secondary Traumatic Stress on Depression

	Predictor	Estimate	SE	t	p	Stand. Estimate
Model 1	Intercept ᵃ	-0.65929	1.211	-0.5445	0.587	
	Age:					
	2 – 1	0.20879	0.169	1.2339	0.219	0.28287
	3 – 1	0.02813	0.199	0.1417	0.887	0.03811
	4 – 1	-0.06874	0.232	-0.2965	0.767	-0.09313
	5 – 1	0.32683	0.252	1.2969	0.196	0.44281
	6 – 1	-0.01978	0.294	-0.0672	0.947	-0.0268
	7 – 1	0.01968	0.33	0.0596	0.953	0.02666
	8 – 1	-0.3686	0.363	-1.0145	0.312	-0.4994
	Gender:					
	2 – 1	0.35411	0.271	1.3068	0.193	0.47978
	3 – 1	0.86597	0.558	1.5528	0.122	1.17326
	4 – 1	1.37747	0.733	1.8783	0.062	1.86628
	5 – 1	-1.06494	0.756	-1.4087	0.16	-1.44285
	Race:					
	1 – 0	1.17139	0.823	1.4227	0.156	1.58706
	2 – 0	1.46796	0.879	1.6707	0.096	1.98888
	3 – 0	0.59758	0.95	0.6287	0.53	0.80964
	4 – 0	1.12323	0.92	1.2215	0.223	1.52182
	5 – 0	1.16115	0.883	1.3143	0.19	1.57319
	8 – 0	1.23039	0.892	1.3798	0.169	1.66701
	Income:					
	2 – 1	0.00315	0.261	0.012	0.99	0.00426
	3 – 1	0.02703	0.28	0.0965	0.923	0.03662
	4 – 1	-0.14515	0.294	-0.4937	0.622	-0.19665
	5 – 1	-0.19204	0.325	-0.5915	0.555	-0.26019
	6 – 1	-0.2819	0.332	-0.8481	0.397	-0.38193
	7 – 1	-0.45715	0.334	-1.3705	0.172	-0.61937

8 – 1	-0.12299	0.318	-0.387	0.699	-0.16663

US Rgn:

2 – 1	0.17224	0.206	0.8365	0.404	0.23336
3 – 1	0.28568	0.157	1.8239	0.07	0.38706
4 – 1	0.19581	0.166	1.182	0.239	0.26529
5 – 1	0.24322	0.189	1.2839	0.201	0.32953
6 – 1	0.47049	0.222	2.1156	0.036	0.63745
7 – 1	0.08609	0.161	0.5332	0.594	0.11665

Marital:

2 – 1	-0.17567	0.133	-1.3174	0.189	-0.238
3 – 1	0.26702	0.143	1.8713	0.063	0.36177
4 – 1	-0.4044	0.762	-0.5307	0.596	-0.54791
5 – 1	0.11254	0.226	0.499	0.618	0.15247
6 – 1	0.56676	0.748	0.7577	0.45	0.76788

Education:

2 – 1	-0.55413	0.839	-0.6602	0.51	-0.75077
3 – 1	-0.7615	0.803	-0.9488	0.344	-1.03173
4 – 1	-0.95956	0.812	-1.182	0.239	-1.30007
5 – 1	-0.87673	0.812	-1.0801	0.281	-1.18784
6 – 1	-0.7409	0.802	-0.9241	0.357	-1.00381
7 – 1	-0.9597	0.836	-1.1474	0.253	-1.30027
8 – 1	-0.8156	0.85	-0.9599	0.338	-1.10502
9 – 1	-1.2635	0.973	-1.2991	0.195	-1.71186

Ten_Field:

2 – 1	0.56748	0.39	1.4538	0.148	0.76886
3 – 1	0.98117	0.393	2.4967	0.013	1.32934
4 – 1	0.72301	0.403	1.7944	0.074	0.97958
5 – 1	0.99622	0.408	2.4404	0.016	1.34974
6 – 1	0.87788	0.425	2.066	0.04	1.1894
7 – 1	1.2635	0.435	2.9066	0.004	1.71187
8 – 1	0.81852	0.414	1.9759	0.05	1.10898

Employment status:

1 – 0	0.10367	0.288	0.3606	0.719	0.14046
2 – 0	0.19311	0.333	0.5792	0.563	0.26164
3 – 0	0.44013	0.473	0.9306	0.353	0.59632

Current Pos:

1 – 0	-0.02691	0.919	-0.0293	0.977	-0.03646
2 – 0	-0.15897	0.341	-0.4663	0.641	-0.21538
3 – 0	0.31392	0.218	1.4426	0.151	0.42532
4 – 0	0.00213	0.191	0.0111	0.991	0.00288
5 – 0	0.05605	0.274	0.2049	0.838	0.07595
6 – 0	0.30942	0.615	0.5033	0.615	0.41922

	Predictor	Estimate	SE	t	p	Stand. Estimate
	Ten-Posn:					
	2 – 1	0.02713	0.227	0.1195	0.905	0.03675
	3 – 1	0.04144	0.2	0.207	0.836	0.05614
	4 – 1	-0.03258	0.23	-0.1418	0.887	-0.04415
	5 – 1	0.01184	0.234	0.0505	0.96	0.01605
	6 – 1	0.08191	0.293	0.2796	0.78	0.11098
	7 – 1	0.10545	0.238	0.4426	0.659	0.14287
	Hosp type:					
	1 – 0	-0.21348	0.161	-1.3244	0.187	-0.28924
	2 – 0	0.88347	0.462	1.9123	0.057	1.19697
	3 – 0	0.1628	0.296	0.5497	0.583	0.22058
	4 – 0	-0.07079	0.281	-0.252	0.801	-0.09592
	5 – 0	-0.2823	0.186	-1.5155	0.131	-0.38248
	Geog work:					
	2 – 1	0.09681	0.117	0.8251	0.41	0.13117
	3 – 1	0.21663	0.149	1.4583	0.146	0.29351
	Shift/week:					
	2 – 1	0.46131	0.476	0.9701	0.333	0.62501
	3 – 1	0.4953	0.404	1.2273	0.221	0.67107
	4 – 1	0.64595	0.4	1.6157	0.108	0.87518
	5 – 1	1.29379	0.548	2.3611	0.019	1.7529
	Shift time:					
	2 – 1	0.20077	0.217	0.9235	0.357	0.27202
	3 – 1	0.66807	0.33	2.023	0.044	0.90514
	4 – 1	0.12454	0.136	0.9156	0.361	0.16874
	Euth/shift:					
	2 – 1	0.11036	0.117	0.9434	0.347	0.14952
	3 – 1	0.17396	0.15	1.1578	0.248	0.23569
	4 – 1	0.26837	0.251	1.0689	0.286	0.3636
	5 – 1	0.11416	0.223	0.5113	0.61	0.15467
	Predictor	**Estimate**	**SE**	**t**	**p**	**Stand. Estimate**
Model 2	Intercept [a]	0.96299	1.0822	0.8898	0.375	
	Age:					
	2 – 1	0.16598	0.1444	1.1491	0.252	0.22488
	3 – 1	0.07341	0.1698	0.4323	0.666	0.09946
	4 – 1	-0.07922	0.1988	-0.3985	0.691	-0.10733
	5 – 1	0.171	0.2161	0.7913	0.43	0.23169
	6 – 1	-0.02171	0.2513	-0.0864	0.931	-0.02941
	7 – 1	0.10076	0.2818	0.3576	0.721	0.13651
	8 – 1	-0.35917	0.3115	-1.1532	0.25	-0.48663
	Gender:					
	2 – 1	0.28764	0.2338	1.2302	0.22	0.38971

3 – 1	0.94788	0.4779	1.9835	0.049	1.28424
4 – 1	0.70302	0.6363	1.1049	0.271	0.95249
5 – 1	-0.7637	0.6459	-1.1824	0.238	-1.03471
Race:					
1 – 0	1.08231	0.7043	1.5366	0.126	1.46638
2 – 0	1.59092	0.7518	2.1163	0.036	2.15547
3 – 0	0.74723	0.8133	0.9188	0.359	1.0124
4 – 0	1.07177	0.7842	1.3666	0.173	1.45209
5 – 0	1.0116	0.7577	1.3351	0.183	1.37057
8 – 0	0.82831	0.7642	1.0839	0.28	1.12224
Income:					
2 – 1	-0.0581	0.2236	-0.2598	0.795	-0.07871
3 – 1	-0.10052	0.2395	-0.4196	0.675	-0.13619
4 – 1	-0.21741	0.2513	-0.8652	0.388	-0.29456
5 – 1	-0.40593	0.2782	-1.459	0.146	-0.54997
6 – 1	-0.37109	0.2844	-1.3049	0.193	-0.50278
7 – 1	-0.4083	0.2853	-1.4314	0.154	-0.55319
8 – 1	-0.29911	0.272	-1.0998	0.273	-0.40526
US Rgn:					
2 – 1	0.2204	0.1765	1.2488	0.213	0.29861
3 – 1	0.17267	0.1343	1.2857	0.2	0.23394
4 – 1	0.02109	0.1428	0.1477	0.883	0.02858
5 – 1	0.17996	0.1628	1.1053	0.27	0.24382
6 – 1	0.27818	0.1917	1.4515	0.148	0.37689
7 – 1	0.04911	0.1383	0.3552	0.723	0.06653
Marital:					
2 – 1	-0.03939	0.115	-0.3426	0.732	-0.05337
3 – 1	0.26613	0.122	2.1821	0.03	0.36057
4 – 1	-0.11193	0.6547	-0.171	0.864	-0.15165
5 – 1	0.16782	0.1929	0.8698	0.385	0.22738
6 – 1	0.02684	0.6454	0.0416	0.967	0.03636
Education:					
2 – 1	-0.18826	0.7188	-0.2619	0.794	-0.25507
3 – 1	-0.20609	0.6916	-0.298	0.766	-0.27922
4 – 1	-0.4179	0.698	-0.5987	0.55	-0.5662
5 – 1	-0.30426	0.6983	-0.4357	0.664	-0.41223
6 – 1	-0.24672	0.6887	-0.3582	0.721	-0.33427
7 – 1	-0.30388	0.7216	-0.4211	0.674	-0.41171
8 – 1	-0.44902	0.7285	-0.6163	0.538	-0.60835
9 – 1	-0.71576	0.8324	-0.8598	0.391	-0.96975
Ten_Field:					
2 – 1	0.67416	0.3338	2.0196	0.045	0.91339
3 – 1	0.9189	0.3358	2.7363	0.007	1.24498

4 – 1	0.73936	0.3446	2.1455	0.033	1.00173
5 – 1	0.71012	0.35	2.0287	0.044	0.96211
6 – 1	0.81296	0.3626	2.2423	0.026	1.10144
7 – 1	1.18126	0.3711	3.1834	0.002	1.60044
8 – 1	0.72178	0.3543	2.0372	0.043	0.97791
Employment status:					
1 – 0	0.15201	0.2464	0.6168	0.538	0.20595
2 – 0	0.2006	0.2871	0.6988	0.486	0.27179
3 – 0	0.16464	0.412	0.3996	0.69	0.22307
Current Pos:					
1 – 0	-0.39916	0.7861	-0.5078	0.612	-0.54081
2 – 0	-0.5778	0.2962	-1.9505	0.053	-0.78284
3 – 0	0.07718	0.1882	0.4102	0.682	0.10456
4 – 0	-0.08847	0.1636	-0.5408	0.589	-0.11987
5 – 0	-0.18149	0.2353	-0.7715	0.441	-0.24589
6 – 0	0.34256	0.5326	0.6431	0.521	0.46411
Ten-Posn:					
2 – 1	-0.1177	0.1954	-0.6024	0.548	-0.15946
3 – 1	-0.07144	0.1727	-0.4137	0.68	-0.09679
4 – 1	-0.10543	0.1997	-0.5281	0.598	-0.14284
5 – 1	0.03581	0.2001	0.1789	0.858	0.04851
6 – 1	0.00273	0.2505	0.0109	0.991	0.0037
7 – 1	0.11843	0.2035	0.582	0.561	0.16045
Hosp type:					
1 – 0	-0.22936	0.1399	-1.6397	0.103	-0.31076
2 – 0	0.97899	0.3952	2.4771	0.014	1.32639
3 – 0	0.1689	0.2529	0.6679	0.505	0.22884
4 – 0	-0.17579	0.2405	-0.7309	0.466	-0.23817
5 – 0	-0.20041	0.1609	-1.2452	0.215	-0.27153
Geog work:					
2 – 1	0.10808	0.1004	1.0763	0.283	0.14644
3 – 1	0.12884	0.1276	1.0101	0.314	0.17456
Shift/week:					
2 – 1	-0.10136	0.4166	-0.2433	0.808	-0.13732
3 – 1	0.03206	0.3539	0.0906	0.928	0.04344
4 – 1	0.15862	0.3499	0.4534	0.651	0.21491
5 – 1	0.4272	0.4841	0.8824	0.379	0.57879
Shift time:					
2 – 1	0.14979	0.1879	0.797	0.426	0.20295
3 – 1	0.73828	0.2833	2.606	0.01	1.00026
4 – 1	0.19211	0.1169	1.6431	0.102	0.26028
Euth/shift:					

Predictor	Estimate	SE	t	p	Stand. Estimate
2 – 1	0.0779	0.1027	0.7584	0.449	0.10554
3 – 1	0.06822	0.1293	0.5276	0.598	0.09242
4 – 1	0.14553	0.2157	0.6746	0.501	0.19717
5 – 1	-0.07528	0.1923	-0.3915	0.696	-0.10199
POSS	-0.06665	0.042	-1.588	0.114	-0.09769
FOC-Mean	0.12509	0.047	2.6613	0.008	0.15216
SelfComp	-0.52888	0.0781	-6.7742	< .001	-0.39517

	Predictor	Estimate	SE	t	p	Stand. Estimate
Model 3	Intercept [a]	2.24645	1.0686	2.10226	0.037	
	Age:					
	2 – 1	0.16064	0.1376	1.16716	0.245	0.21764
	3 – 1	0.13513	0.1623	0.83237	0.406	0.18308
	4 – 1	-0.05505	0.1895	-0.29049	0.772	-0.07459
	5 – 1	0.18979	0.206	0.92144	0.358	0.25713
	6 – 1	0.0167	0.2396	0.06973	0.944	0.02263
	7 – 1	0.13751	0.2686	0.51191	0.609	0.18631
	8 – 1	-0.34291	0.2968	-1.15536	0.249	-0.46459
	Gender:					
	2 – 1	0.20427	0.2235	0.91386	0.362	0.27676
	3 – 1	1.08472	0.4563	2.37714	0.018	1.46965
	4 – 1	0.90175	0.6078	1.48355	0.14	1.22174
	5 – 1	-1.07413	0.6192	-1.73482	0.084	-1.4553
	Race:					
	1 – 0	0.93076	0.6719	1.38519	0.168	1.26105
	2 – 0	1.37106	0.7179	1.90978	0.058	1.85759
	3 – 0	0.82557	0.7751	1.06507	0.288	1.11854
	4 – 0	0.86882	0.7486	1.16065	0.247	1.17713
	5 – 0	0.79028	0.7236	1.09216	0.276	1.07072
	8 – 0	0.67599	0.7289	0.9274	0.355	0.91587
	Income:					
	2 – 1	-0.05554	0.2131	-0.26069	0.795	-0.07525
	3 – 1	-0.19086	0.2291	-0.83312	0.406	-0.25859
	4 – 1	-0.2427	0.2395	-1.01339	0.312	-0.32882
	5 – 1	-0.43753	0.2652	-1.64983	0.101	-0.59279
	6 – 1	-0.47916	0.272	-1.76159	0.08	-0.64919
	7 – 1	-0.38617	0.2718	-1.42057	0.157	-0.52321
	8 – 1	-0.38492	0.2598	-1.48143	0.14	-0.52151
	US Rgn:					
	2 – 1	0.19987	0.1682	1.18806	0.236	0.27079
	3 – 1	0.19377	0.1281	1.51323	0.132	0.26253
	4 – 1	0.03395	0.1361	0.24941	0.803	0.046
	5 – 1	0.22285	0.1554	1.43387	0.153	0.30193

6 – 1	0.23263	0.1829	1.27201	0.205	0.31519
7 – 1	0.05709	0.1318	0.43333	0.665	0.07736
Marital:					
2 – 1	-0.035	0.1096	-0.31941	0.75	-0.04742
3 – 1	0.22858	0.1165	1.96215	0.051	0.3097
4 – 1	0.24994	0.6288	0.39748	0.691	0.33863
5 – 1	0.16428	0.1838	0.89361	0.373	0.22258
6 – 1	-0.08681	0.6154	-0.14105	0.888	-0.11761
Education:					
2 – 1	-0.05622	0.6855	-0.08202	0.935	-0.07618
3 – 1	-0.13807	0.6592	-0.20945	0.834	-0.18707
4 – 1	-0.2964	0.6656	-0.44532	0.657	-0.40159
5 – 1	-0.17924	0.6659	-0.26916	0.788	-0.24284
6 – 1	-0.13831	0.6567	-0.21063	0.833	-0.1874
7 – 1	-0.13309	0.6886	-0.19329	0.847	-0.18032
8 – 1	-0.42774	0.6942	-0.61618	0.538	-0.57953
9 – 1	-0.73134	0.7932	-0.92201	0.358	-0.99086
Ten_Field:					
2 – 1	0.44936	0.3218	1.39629	0.164	0.60882
3 – 1	0.76313	0.3218	2.3716	0.019	1.03394
4 – 1	0.4995	0.3325	1.50223	0.135	0.67676
5 – 1	0.46449	0.3378	1.37497	0.171	0.62932
6 – 1	0.62362	0.3479	1.79239	0.075	0.84492
7 – 1	0.948	0.3572	2.65381	0.009	1.2844
8 – 1	0.48927	0.3414	1.43319	0.153	0.6629
Employment status:					
1 – 0	0.07316	0.2354	0.31075	0.756	0.09913
2 – 0	0.10365	0.2744	0.3778	0.706	0.14043
3 – 0	0.02277	0.3938	0.05783	0.954	0.03086
Current Pos:					
1 – 0	-0.43563	0.7491	-0.58155	0.562	-0.59022
2 – 0	-0.62477	0.2824	-2.21198	0.028	-0.84647
3 – 0	0.15521	0.1801	0.86185	0.39	0.21029
4 – 0	-0.05891	0.156	-0.37758	0.706	-0.07982
5 – 0	-0.14744	0.2243	-0.65738	0.512	-0.19976
6 – 0	0.23799	0.508	0.46846	0.64	0.32245
Ten-Posn:					
2 – 1	-0.08987	0.1863	-0.48249	0.63	-0.12176
3 – 1	-0.06059	0.1645	-0.36823	0.713	-0.08209
4 – 1	-3.61e−4	0.1916	-0.00189	0.998	-4.90e−4
5 – 1	0.10982	0.1914	0.57387	0.567	0.14878
6 – 1	-0.05905	0.2391	-0.24695	0.805	-0.08

Predictor	Estimate	SE	t	p	Stand. Estimate
7 – 1	0.19722	0.1946	1.01321	0.312	0.2672
Hosp type:					
1 – 0	-0.24686	0.1333	-1.85137	0.066	-0.33446
2 – 0	1.17982	0.3791	3.112	0.002	1.59849
3 – 0	0.09932	0.2414	0.41138	0.681	0.13456
4 – 0	-0.24455	0.2297	-1.06487	0.288	-0.33133
5 – 0	-0.18277	0.1534	-1.19143	0.235	-0.24762
Geog work:					
2 – 1	0.14321	0.096	1.49194	0.137	0.19403
3 – 1	0.09604	0.1217	0.78881	0.431	0.13012
Shift/week:					
2 – 1	-0.06165	0.3971	-0.15524	0.877	-0.08352
3 – 1	-0.02776	0.3375	-0.08224	0.935	-0.03761
4 – 1	0.08489	0.3337	0.25435	0.799	0.11501
5 – 1	0.12853	0.4659	0.27588	0.783	0.17414
Shift time:					
2 – 1	0.21305	0.1796	1.18619	0.237	0.28865
3 – 1	0.86394	0.2713	3.18407	0.002	1.17052
4 – 1	0.21757	0.1115	1.95051	0.053	0.29478
Euth/shift:					
2 – 1	0.00828	0.099	0.08365	0.933	0.01122
3 – 1	-0.04151	0.1255	-0.33073	0.741	-0.05624
4 – 1	0.00955	0.2077	0.04597	0.963	0.01294
5 – 1	-0.04179	0.1834	-0.22793	0.82	-0.05663
POSS	-0.00309	0.0423	-0.0729	0.942	-0.00452
FOC-Mean	0.12776	0.0448	2.85229	0.005	0.1554
SelfComp	-0.48846	0.0749	-6.52043	< .001	-0.36497
CS	-0.33614	0.0734	-4.58059	< .001	-0.27228

	Predictor	Estimate	SE	t	p	Stand. Estimate
Model 4	Intercept [a]	-1.35832	1.0994	-1.2355	0.218	
	Age:					
	2 – 1	0.10809	0.1243	0.8696	0.386	0.14644
	3 – 1	0.04237	0.147	0.2883	0.773	0.05741
	4 – 1	-0.05568	0.1708	-0.326	0.745	-0.07544
	5 – 1	0.20014	0.1857	1.078	0.282	0.27116
	6 – 1	-0.02758	0.216	-0.1277	0.899	-0.03737
	7 – 1	0.12822	0.2421	0.5295	0.597	0.17371
	8 – 1	-0.20948	0.2682	-0.781	0.436	-0.28382
	Gender:					
	2 – 1	0.26284	0.2017	1.3034	0.194	0.35612
	3 – 1	0.74291	0.4144	1.7929	0.075	1.00654
	4 – 1	0.82332	0.548	1.5024	0.135	1.11549

5 – 1	-0.75235	0.5601	-1.3433	0.181	-1.01932

Race:

1 – 0	0.43431	0.61	0.7119	0.477	0.58843
2 – 0	0.69908	0.6546	1.068	0.287	0.94715
3 – 0	0.31987	0.7026	0.4553	0.649	0.43338
4 – 0	0.43155	0.6778	0.6367	0.525	0.58469
5 – 0	0.1702	0.6586	0.2584	0.796	0.23059
8 – 0	0.2669	0.6597	0.4045	0.686	0.36161

Income:

2 – 1	-0.01864	0.1921	-0.097	0.923	-0.02526
3 – 1	-0.14337	0.2066	-0.6939	0.489	-0.19425
4 – 1	-0.15285	0.2163	-0.7067	0.481	-0.20709
5 – 1	-0.26561	0.2404	-1.105	0.271	-0.35986
6 – 1	-0.3817	0.2456	-1.5542	0.122	-0.51715
7 – 1	-0.22204	0.2462	-0.9018	0.368	-0.30084
8 – 1	-0.32982	0.2343	-1.4074	0.161	-0.44685

US Rgn:

2 – 1	0.11834	0.1521	0.778	0.438	0.16034
3 – 1	0.10688	0.1161	0.9203	0.359	0.1448
4 – 1	0.0061	0.1228	0.0497	0.96	0.00826
5 – 1	0.14927	0.1405	1.0624	0.289	0.20224
6 – 1	0.04856	0.1671	0.2907	0.772	0.0658
7 – 1	-0.00737	0.1191	-0.0618	0.951	-0.00998

Marital:

2 – 1	-0.05208	0.0988	-0.5271	0.599	-0.07056
3 – 1	0.13759	0.1059	1.2998	0.195	0.18642
4 – 1	0.07108	0.5674	0.1253	0.9	0.0963
5 – 1	0.11346	0.1659	0.684	0.495	0.15372
6 – 1	-0.02338	0.5548	-0.0421	0.966	-0.03168

Education:

2 – 1	0.44897	0.6224	0.7214	0.472	0.60829
3 – 1	0.30648	0.5978	0.5127	0.609	0.41524
4 – 1	0.20907	0.6045	0.3458	0.73	0.28326
5 – 1	0.25244	0.6036	0.4182	0.676	0.34202
6 – 1	0.32191	0.5958	0.5403	0.59	0.43615
7 – 1	0.28859	0.6237	0.4627	0.644	0.391
8 – 1	0.06131	0.6298	0.0973	0.923	0.08307
9 – 1	-0.12234	0.7205	-0.1698	0.865	-0.16576

Ten_Field:

2 – 1	0.45234	0.2901	1.5594	0.121	0.61286
3 – 1	0.62183	0.2908	2.1385	0.034	0.84249
4 – 1	0.2244	0.3024	0.742	0.459	0.30403
5 – 1	0.29258	0.3055	0.9576	0.339	0.3964

6 – 1	0.48303	0.3143	1.5369	0.126	0.65444
7 – 1	0.71402	0.3238	2.205	0.029	0.9674
8 – 1	0.31124	0.3088	1.0078	0.315	0.42168
Employment status:					
1 – 0	0.02171	0.2124	0.1022	0.919	0.02941
2 – 0	-0.01421	0.2479	-0.0573	0.954	-0.01926
3 – 0	-0.07084	0.3552	-0.1994	0.842	-0.09598
Current Pos:					
1 – 0	-0.07093	0.6773	-0.1047	0.917	-0.0961
2 – 0	-0.36746	0.2574	-1.4277	0.155	-0.49785
3 – 0	0.18753	0.1624	1.1548	0.25	0.25408
4 – 0	0.05051	0.1415	0.3569	0.722	0.06844
5 – 0	-0.06756	0.2025	-0.3336	0.739	-0.09154
6 – 0	0.49854	0.4595	1.0849	0.279	0.67546
Ten-Posn:					
2 – 1	-0.07854	0.1679	-0.4678	0.64	-0.10641
3 – 1	-0.06646	0.1483	-0.4481	0.655	-0.09004
4 – 1	0.00711	0.1727	0.0412	0.967	0.00963
5 – 1	0.06881	0.1726	0.3987	0.691	0.09323
6 – 1	-0.14017	0.2158	-0.6494	0.517	-0.18991
7 – 1	0.11259	0.1759	0.6402	0.523	0.15255
Hosp type:					
1 – 0	-0.2074	0.1203	-1.7236	0.086	-0.28099
2 – 0	1.13242	0.3418	3.3132	0.001	1.53427
3 – 0	0.22365	0.2184	1.0242	0.307	0.30301
4 – 0	-0.25383	0.207	-1.2262	0.222	-0.3439
5 – 0	-0.10828	0.1387	-0.7807	0.436	-0.14671
Geog work:					
2 – 1	0.09204	0.0868	1.0599	0.291	0.12471
3 – 1	0.07206	0.1098	0.6563	0.512	0.09763
Shift/week:					
2 – 1	0.16058	0.3594	0.4468	0.656	0.21757
3 – 1	-0.05037	0.3042	-0.1656	0.869	-0.06825
4 – 1	0.06186	0.3008	0.2056	0.837	0.08381
5 – 1	0.19645	0.42	0.4677	0.641	0.26617
Shift time:					
2 – 1	-0.0173	0.1654	-0.1046	0.917	-0.02344
3 – 1	0.68838	0.2459	2.7992	0.006	0.93266
4 – 1	0.15065	0.101	1.4912	0.138	0.20411
Euth/shift:					
2 – 1	-0.04413	0.0896	-0.4925	0.623	-0.05979
3 – 1	-0.17153	0.1147	-1.495	0.137	-0.2324

	Predictor	Estimate	SE	t	p	Stand. Estimate
	4 – 1	-0.02154	0.1873	-0.115	0.909	-0.02919
	5 – 1	-0.10288	0.1655	-0.6215	0.535	-0.13939
	POSS	0.06003	0.0393	1.5288	0.128	0.08799
	FOC-Mean	0.12572	0.0404	3.1138	0.002	0.15292
	SelfComp	-0.31776	0.072	-4.4111	< .001	-0.23743
	CS	-0.03889	0.0793	-0.4905	0.624	-0.0315
	BO	0.72306	0.1063	6.8006	< .001	0.48493

	Predictor	Estimate	SE	t	p	Stand. Estimate
Model 5	Intercept [a]	-0.94048	1.0372	-0.9067	0.366	
	Age:					
	2 – 1	0.0663	0.1172	0.5657	0.572	0.08982
	3 – 1	0.07879	0.1384	0.5693	0.57	0.10675
	4 – 1	-0.05387	0.1607	-0.3353	0.738	-0.07299
	5 – 1	0.14885	0.1749	0.8511	0.396	0.20167
	6 – 1	-0.03745	0.2032	-0.1843	0.854	-0.05074
	7 – 1	0.31186	0.2305	1.3529	0.178	0.42252
	8 – 1	-0.11632	0.2529	-0.4599	0.646	-0.15759
	Gender:					
	2 – 1	0.2512	0.1897	1.3243	0.187	0.34035
	3 – 1	0.52663	0.392	1.3435	0.181	0.7135
	4 – 1	0.56188	0.5179	1.0849	0.279	0.76127
	5 – 1	-0.68897	0.5269	-1.3075	0.193	-0.93346
	Race:					
	1 – 0	0.43491	0.5738	0.758	0.449	0.58924
	2 – 0	0.73466	0.6157	1.1932	0.234	0.99536
	3 – 0	0.35084	0.6609	0.5309	0.596	0.47534
	4 – 0	0.26022	0.6383	0.4076	0.684	0.35256
	5 – 0	0.18957	0.6194	0.3061	0.76	0.25684
	8 – 0	0.29728	0.6205	0.4791	0.632	0.40277
	Income:					
	2 – 1	-0.04838	0.1808	-0.2676	0.789	-0.06554
	3 – 1	-0.14109	0.1943	-0.7261	0.469	-0.19116
	4 – 1	-0.13171	0.2035	-0.6474	0.518	-0.17845
	5 – 1	-0.21916	0.2263	-0.9686	0.334	-0.29693
	6 – 1	-0.38186	0.231	-1.6532	0.1	-0.51736
	7 – 1	-0.27401	0.2318	-1.1821	0.239	-0.37124
	8 – 1	-0.30519	0.2205	-1.3843	0.168	-0.41348
	US Rgn:					
	2 – 1	0.10177	0.1431	0.7112	0.478	0.13789
	3 – 1	0.14764	0.1095	1.3482	0.179	0.20003
	4 – 1	0.06556	0.116	0.565	0.573	0.08883
	5 – 1	0.11652	0.1323	0.8807	0.38	0.15787

6 – 1	0.06109	0.1571	0.3888	0.698	0.08277
7 – 1	0.0113	0.1121	0.1007	0.92	0.0153
Marital:					
2 – 1	-0.03546	0.093	-0.3814	0.703	-0.04804
3 – 1	0.1429	0.0996	1.4353	0.153	0.19362
4 – 1	0.48048	0.5395	0.8905	0.374	0.65099
5 – 1	0.09327	0.1561	0.5977	0.551	0.12637
6 – 1	-0.41367	0.5273	-0.7845	0.434	-0.56046
Education:					
2 – 1	0.23971	0.5868	0.4085	0.683	0.32478
3 – 1	0.20566	0.5626	0.3656	0.715	0.27865
4 – 1	0.14651	0.5687	0.2576	0.797	0.19851
5 – 1	0.17922	0.5678	0.3156	0.753	0.24282
6 – 1	0.21265	0.5607	0.3792	0.705	0.28811
7 – 1	0.32726	0.5867	0.5578	0.578	0.44339
8 – 1	-0.09417	0.5931	-0.1588	0.874	-0.12759
9 – 1	-0.11767	0.6777	-0.1736	0.862	-0.15942
Ten_Field:					
2 – 1	0.45874	0.2728	1.6814	0.094	0.62152
3 – 1	0.57444	0.2736	2.0992	0.037	0.77829
4 – 1	0.2629	0.2845	0.9239	0.357	0.35619
5 – 1	0.19611	0.288	0.681	0.497	0.26571
6 – 1	0.39586	0.2961	1.337	0.183	0.53634
7 – 1	0.592	0.3055	1.9379	0.054	0.80208
8 – 1	0.27885	0.2905	0.9598	0.338	0.3778
Employment status:					
1 – 0	0.01966	0.1997	0.0984	0.922	0.02664
2 – 0	-0.07572	0.2335	-0.3244	0.746	-0.1026
3 – 0	-0.08898	0.3341	-0.2663	0.79	-0.12055
Current Pos:					
1 – 0	-0.10988	0.6371	-0.1725	0.863	-0.14887
2 – 0	-0.31699	0.2423	-1.3084	0.192	-0.42947
3 – 0	0.10842	0.1535	0.7062	0.481	0.14689
4 – 0	0.01977	0.1333	0.1483	0.882	0.02678
5 – 0	-0.06193	0.1905	-0.3252	0.745	-0.08391
6 – 0	0.43046	0.4324	0.9955	0.321	0.58321
Ten-Posn:					
2 – 1	-0.08036	0.1579	-0.5089	0.611	-0.10888
3 – 1	-0.04415	0.1396	-0.3164	0.752	-0.05982
4 – 1	0.00266	0.1624	0.0164	0.987	0.00361
5 – 1	0.12831	0.1627	0.7885	0.431	0.17385
6 – 1	-0.04116	0.2039	-0.2018	0.84	-0.05577

7 – 1	0.10045	0.1654	0.6072	0.544	0.1361
Hosp type:					
1 – 0	-0.14739	0.1138	-1.2955	0.197	-0.19969
2 – 0	0.81053	0.3275	2.4749	0.014	1.09816
3 – 0	0.22321	0.2054	1.0868	0.278	0.30242
4 – 0	-0.3293	0.1952	-1.6866	0.093	-0.44615
5 – 0	-0.07484	0.1306	-0.573	0.567	-0.1014
Geog work:					
2 – 1	0.11542	0.0818	1.4109	0.16	0.15638
3 – 1	0.04049	0.1034	0.3914	0.696	0.05486
Shift/week:					
2 – 1	-0.01837	0.3398	-0.054	0.957	-0.02488
3 – 1	-0.25391	0.2889	-0.879	0.38	-0.34401
4 – 1	-0.15142	0.286	-0.5295	0.597	-0.20515
5 – 1	-0.11722	0.3998	-0.2932	0.77	-0.15881
Shift time:					
2 – 1	-0.09584	0.1563	-0.6132	0.54	-0.12985
3 – 1	0.59963	0.2319	2.5852	0.01	0.81241
4 – 1	0.10054	0.0955	1.0526	0.294	0.13621
Euth/shift:					
2 – 1	-0.03897	0.0843	-0.4624	0.644	-0.0528
3 – 1	-0.13682	0.1081	-1.2654	0.207	-0.18537
4 – 1	0.01644	0.1763	0.0932	0.926	0.02227
5 – 1	-0.07019	0.1558	-0.4505	0.653	-0.0951
POSS	0.04073	0.0371	1.0971	0.274	0.05969
FOC-Mean	0.07842	0.0391	2.0072	0.046	0.09539
SelfComp	-0.2581	0.0687	-3.7547	< .001	-0.19285
CS	-0.12209	0.0763	-1.6001	0.111	-0.0989
BO	0.44671	0.1135	3.9348	< .001	0.2996
STS	0.35976	0.07	5.1418	< .001	0.31521

[a] Represents reference level

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