

RELATIONSHIPS BETWEEN COMPASSION FATIGUE AND BURNOUT

A QUANTITATIVE STUDY OF RELATIONSHIPS BETWEEN COMPASSION FATIGUE
AND BURNOUT TO TURNOVER INTENTION IN ALABAMA

TRAUMA CENTER NURSES

by

Wendell Waters

Dissertation

Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Business Administration

Liberty University, School of Business

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Abstract

Registered nurses are fundamental members of the care team who provide skilled healthcare services in trauma centers. Research reports that trauma center nurses demonstrate high levels of compassion fatigue, burnout, and turnover. Turnover among trauma center nurses results in patient care challenges and increased healthcare costs. Although there have been multiple studies on burnout, compassion fatigue, and turnover, literature did not reveal research on how compassion fatigue, burnout, and turnover intention relates to nurses in trauma centers. Turnover intention is a concept that assesses why people stay with their job. Turnover intention has been established to rationalize intent to depart and voluntary turnover above and beyond the conventional indicators of organizational loyalty and job satisfaction. This quantitative, non-experimental correlational research study examined the relationship between compassion fatigue, burnout, and turnover intention. The analysis established that there is a relationship between CF, BO, and TI. The results may be advantageous to trauma center leaders as they evaluate and amend their human resource management practices that are designed at increasing retention and decreasing turnover.

Keywords: Compassion fatigue, burnout, turnover intention, trauma centers, healthcare quality

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Approvals

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Dedication

I would like to thank my beautiful, supportive wife for giving me the motivation to keep moving forward. Thank you for encouraging me and pushing me to be the best that I can be. I would also like to dedicate this study to my son. Son, I hope my hard work clears a path for you to do great things and shows you that you can be whatever you want in life. Thank you to my parents for working tirelessly and instilling a strong work ethic. Thank you to my siblings for always inspiring me. Lastly, I would like to thank my all of my professors who provided valuable feedback and kept me engaged throughout this entire process.

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Section 1: Foundation of the Study

Registered nurses are critical players in our healthcare delivery system and have been reported to display a high level of compassion fatigue and burnout. Compassion fatigue and burnout in nurses at trauma centers can destructively affect patient care. Trauma center challenges include economic, as well as resource difficulties that can possibly make the work environment stressful. Furthermore, employee turnover is a concern for the healthcare industry because employees with turnover intentions may exhibit decreased commitment and increased distrust towards the organization, which may affect organizational profits. The aim of this study was to examine the relationships between compassion fatigue and burnout to turnover intention in nurses employed by trauma centers.

This section examines the relationships between compassion fatigue and burnout to turnover intention in nurses in Alabama trauma centers. It discusses organizational burdens and challenges encountered by nurses. The chapter includes the historical, contemporary, and theoretical backgrounds of the study. The problem statement, purpose statement, nature of the study, research questions, and theoretical framework are presented. Lastly, a list of assumptions, limitations, delimitations, significance of the study, and definitions of key terms are presented.

Background of the Problem

Healthcare organizations throughout the United States battle to address a decreasing RN workforce. Extensive assets are expended in recruiting RNs, as well as other healthcare workers, and in designing sustainable frameworks for staff retention. Acknowledging the organizational demands and barriers encountered by nurses, more institutions are focusing attention on concerns relating to occupational stress and psychosocial dynamics such as burnout and compassion fatigue (Denigris et al., 2016).

The concept of compassion fatigue and employee burnout in the healthcare industry has gained more attention in research and organizational development globally over the past few years. Compassion fatigue is defined as an occupational-associated stress response in healthcare providers that is considered a 'cost of caring' and a fundamental contributor to the loss of compassion in healthcare (Sinclair et al., 2017). Burnout is a response to sustained exposure to work-related stressors, and it has serious ramifications for healthcare providers and the institutions in which they work (Montgomery et al., 2019). The increased focus on the issues could mitigate the potential losses likely to be incurred by the employees and employers as a result of compassion fatigue and employee burnout (Delaney, 2018). Some of the consequences of compassion fatigue and burnout to the employer include unsafe practices, which puts the facility at risk of malpractice suits, high employee turnover, and extended sick leaves which results in increased worker's compensation claims (Parks-Savage et al., 2018). Employees, on the other hand, may eventually develop stress-related medical conditions such as high blood pressure or gastrointestinal ailments and psychological issues such as depression and anxiety-related disorders (Salvagioni et al., 2017).

During the past decade, multiple studies have been conducted analyzing numerous burnout risk factors, including sociodemographic factors, work experience, personality, and job satisfaction (Delaney, 2018). Another important risk factor identified from the past studies is the specialty of the nurses, which revealed that nurses working in trauma centers are more at risk of developing burnout (Wentzel & Brysiewicz, 2018). Nurses employed by trauma centers encounter considerable on-the-job stress that can result in employee dissatisfaction and emotional exhaustion (Farahbod et al., 2015). The stress is primarily a cause of burnout, the prolonged psychosomatic condition of perceived demands from work overshadowing perceived

resources in the occupational setting (Stadniuk et al., 2017). Acquiring an enhanced comprehension of the magnitude to which nurses and other healthcare providers are affected by disorders such as burnout and compassion fatigue is imperative for the design of a constructive and encouraging clinical atmosphere.

The examination of compassion fatigue is critical because of the effect compassion fatigue has on burnout and employee performance (Cetrano et al., 2017). Disregarded compassion fatigue can cause burnout, so it is essential to recognize the presence of compassion fatigue and its symptoms. The connection between compassion fatigue and turnover intention among trauma nurses also needs to be understood. From the viewpoint of compassion fatigue experienced by trauma center nurses, the current study examines relationships between compassion fatigue and burnout as a predictor for turnover intention.

Problem Statement

The general problem to be addressed is that high levels of compassion fatigue and burnout experienced by nurses employed in trauma centers is resulting in increased turnover and added organizational costs. A 2017 survey specified that registered nurse turnover averaged 14.9%, with a yearly hospital financial loss of \$5.13 M - \$7.86 M and 80% of hospitals reporting a registered nurse vacancy rate higher than 5% (Nursing Solutions Inc, 2017). Hunsaker et al. (2015) found that compassion fatigue and burnout are correlated to a nurse's ability to provide care and turnover. Snavelly (2016) asserted that burnout is linked to a projected 30%-50% of all new RNs either transferring jobs within nursing or abandoning the profession altogether within the first three years of clinical practice.

Compassion fatigue and burnout are vitally underexplored components of trauma nursing, specifically where staffing may be challenging. Hospitals with high patient-to-nurse

ratios and resulting compassion fatigue and burnout are associated with high mortality (death) rates, which result in more inferior quality of care compared to other facility classifications (Munnangi et al., 2018). The specific problem to be addressed is the high levels of compassion fatigue and burnout experienced by trauma center nurses employed in the state of Alabama, which results in increased turnover and adds cost for the organizations.

Purpose Statement

The purpose of this quantitative, correlational study is to evaluate the relationship between compassion fatigue, burnout, and turnover intention for trauma center nurses. The independent variables include compassion fatigue and burnout. The dependent variable is nurse turnover intention. In research on compassion fatigue and burnout in trauma nurses, researchers call for future exploration directed toward examining the factors that lead to compassion fatigue (Nolte et al., 2017) and burnout (Manzano-García & Ayala, 2017).

This study aims to fill that gap in research literature. This larger problem is explored through an in-depth study of the specific factors that influence the development of compassion fatigue and nursing burnout and the correlation to turnover intention in trauma centers in the state of Alabama. Previous studies have shown that certain factors such as the level of education, nursing status, training, and manager support could influence the level of compassion satisfaction, compassion fatigue, and burnout in various nursing environments (Hunsaker et al., 2015; Zhang, Zhang, et al., 2018).

Prior literature has examined compassion fatigue and burnout of nurses in various specialties in multiple settings. These specialties include oncology, pediatrics, and emergency care (Berger et al., 2015; Kelly et al., 2015; Meyer et al., 2015; Sung et al., 2012; Wu et al., 2016). However, although a significant amount of research has been conducted related to

compassion fatigue and burnout in other disciplines and professions, the relationship between compassion fatigue and burnout and turnover intention of nurses in trauma centers has not been examined in the United States.

According to Zhang, Tai, et al. (2018) there was a nursing shortage of 154,018 RNs by 2020 and a predicted shortage of 510,394 RNs by 2030. Prolonged nursing vacancies can result in negative effects on local, regional, and national levels. One study reported hospitals with insufficient staffing are positively correlated with higher readmission rates and increased healthcare costs (McHugh et al., 2013). Nurse turnover and retention influence healthcare workforce development and delivery of clinical care (Kurnat-Thoma et al., 2017). As leaders examine causes of compassion fatigue and burnout, evidence that these factors affect retention may be present. This evidence can be used to retain nurses, reduce organizational costs, and positively influence patient care.

Nature of the Study

This study employed a quantitative, correlational research method to provide a comprehensive examination of the relationship between compassion fatigue, burnout and turnover intention for trauma center nurses. Essentially, this study is designed to examine the significance of the correlation between compassion fatigue, burnout and turnover intention for trauma center nurses by using survey instruments to present findings statistically. Preexisting instruments quantify the variables serially, so that numbered data can be scrutinized using statistical methods.

Discussion of Method

This research used a quantitative, correlational study of nurses employed by trauma centers to examine the relationship of compassion fatigue and burnout to turnover intention. The

quantitative research method consists of using arithmetic, statistical, computational instruments to produce results. It is decisive in its determination as it attempts to ‘quantify’ the issue and comprehend how predominant it is by observing for predictable outcomes to a larger population (Zyphur & Pierides, 2019). A quantitative method was used because this study aimed to establish the association between variables measured statistically (Watson, 2015).

This study collected quantitative data from a survey for analysis. The quantitative method used in this study allowed interpretations of the relationship between the variables of compassion fatigue, burnout, and turnover intention. Moreover, the study intended to examine a sample that characterizes a larger population. The population for this study is trauma center nurses employed in the state of Alabama. A quantitative design allows the conclusions to be generalized so that more comprehensive future research can then be achieved (Creswell & Poth, 2018).

A qualitative method was not selected because qualitative data are unable to establish the relationship between variables (Creswell & Poth, 2018). Qualitative researchers aim to use social phenomenology to concentrate on the accumulation of distinctive independent experiences (Chapman et al., 2015). Qualitative research uses words instead of numbers and uses a naturalistic inquiry to understand social factors, notions, and underlying reasons that affect business performance in a natural setting (Ruel, 2017). Illustrations of qualitative research are phenomenology, grounded theory, narrative, ethnography, and case study.

Mixed methods research involves accumulating both qualitative and quantitative data and integrating the two (Creswell, 2014). The quantitative data incorporates closed-ended data that are statistically assessed and produces an arithmetical validation. Conversely, qualitative data, are more flexible and subjective. The data documents the genuine voice of the participants to be understood and gives interpretation of observed reflections. Mixed method strategies can offset

these shortcomings by allowing for both examination and investigation in the same research study (Shannon-Baker, 2016). As noted by Halcomb and Hickman (2015) this study design fosters the development of useful ideas that cannot be fully understood when one is using only qualitative or quantitative models. A mixed-methods comparison of two distinctive data sources will not augment the study or offer data for the relationship between desired variables. The emphasis on the relationship, not the effects of the variables, is the reason the quantitative, correlational design is the most suitable for this study.

Discussion of Design

The applicable quantitative research design used for this research study is the correlational design. There was no true or quasi experimentation on any of the contributors. Contributors of this quantitative research study did not participate in any control groups, did not receive any treatment and treatment were not suppressed. The correlational design was chosen because the selected registered nurses surveyed in this study were not assigned arbitrarily to receive any treatment. Procured data were amassed voluntarily which removed the capacity to produce decisive causal assumptions.

To generate findings a survey method demonstrated most beneficial for statistical analysis, data procedures, and data gathering. Therefore, the distribution of the specified conclusions while producing any relationship of variables discovered. Consequently, the selected research design, correlational, afforded the relevant means to expose the extent to compassion fatigue and burnout correlates to turnover intention in trauma center nurses. Creswell (2014) asserts that the quantitative research method demonstrates to be very practical when examining relationships that involve statistical tests, predictions, and variables.

Descriptive research seeks to define the present state of a single variable, which is also

unsuitable for this study (Creswell & Poth, 2018). The correlational design is a category of non-experimental research where two variables are measured, and the statistical relationship is examined. This research is non-experimental because no intervention is presented to the population, and no variables are altered (Creswell & Poth, 2018). Causal-comparative/quasi-experimental endeavors to create cause-effect relationships among variables. The emphasis on the relationship, not the effects of the variables, is the reason the correlational design was most appropriate for this study.

Research Questions

The following three questions were addressed in this study:

RQ1: To what extent, if any, is there a relationship between compassion fatigue, burnout, and turnover intention in the trauma center nurses?

RQ2: To what extent, if any, is there a relationship between compassion fatigue, burnout, and turnover intention in the trauma center nurses for specific demographics such as age and years of service as a nurse?

RQ3: To what extent, if any, is there a relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within burnout, and employees' attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses?

Prior research has produced studies that have been conducted analyzing numerous burnout risk factors, including sociodemographic factors, work experience, personality, and job satisfaction (Delaney, 2018). Another important risk factor identified from the past studies is the specialty of the nurses, which revealed that nurses working in trauma centers are more at risk of developing burnout (Wentzel & Brysiewicz, 2018). Determining how the occupation of a trauma

center employee puts them at risk of burnout helps in determining possible impacts and how they could be mitigated.

The problem statement in this research describes existing issues that the research seeks to address. Specifically, it provides context for the research on the relationship between compassion fatigue and burnout to turnover intentions (Park & Ahn, 2015). Notably, as the focal point of this research, compassion fatigue and burnout in trauma center nurses generates relevant questions that the researcher seeks to answer. The research questions are answerable inquiries about specific concerns or issues. The questions emanate from the problem statement and display critical ideas on what the researcher is seeking to examine or study. In essence, practical research questions act as guidance to the research, among other fundamental roles (Concannon et al., 2019). In this case, the research questions are clear and specific to the problems.

The first research question aimed to examine the perceived relationship between compassion fatigue, burnout, and turnover intention in the trauma center nurses. This question relied on the information from the problem statement section to develop appropriate responses. Some of these essential data and information captures the demographic dynamics of the respondents. The second research question further aimed to establish the existence of a relationship between compassion fatigue, burnout, and turnover intention in the trauma center nurses for the demographics of gender, age, and years of service as a trauma nurse.

The last research question assessed whether there was a perceived relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within compassion fatigue, burnout, and employees' attitudes and perceptions of the probability of terminating their current job (turnover intention) in the trauma center nurses (Kaddourah et al., 2018; Vincent et al., 2019).

Hypotheses

This research study examined whether significant relationships existed between the three sets of identified variables (Morgan, 2015). The hypotheses were tested to provide information about the variables. The first hypothesis corresponds to the central research question and sought to examine statistically significant relationships between compassion fatigue and burnout to turnover intention in trauma center nurses. The null hypothesis ($H1_0$) and alternate hypothesis ($H1_a$) are:

H1₀: There is no statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses.

H1_a: There is a statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses.

The second hypothesis corresponds to the research question that examines the statistically significant relationship between compassion fatigue, burnout and turnover intention for demographic factors of age and years in the profession. The null hypothesis ($H2_0$) and alternate hypothesis ($H2_a$) are:

H2₀: There is no statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses for specific demographics such as age and years of service as a trauma nurse.

H2_a: There is a statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses for specific demographics such as age and years of service as a trauma nurse.

The final hypothesis corresponds to the research question that examines the statistically significant relationship between the individual items and factors such as personal

accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within compassion fatigue, burnout, and employees' attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses. The null hypothesis ($H3_0$) and alternate hypothesis ($H3_a$) are:

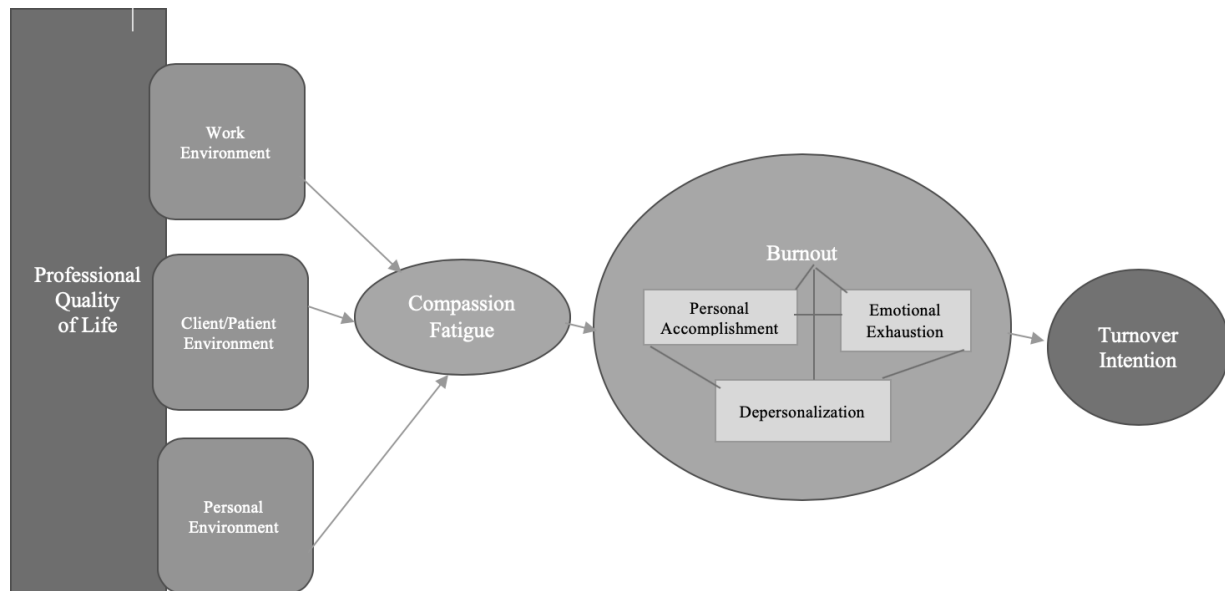
$H3_0$: There is no statistically significant relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within compassion fatigue, burnout, and employees' attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses.

$H3_a$: There is a statistically significant relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within compassion fatigue, burnout, and employees' attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses.

Theoretical Framework

This theoretical framework was amalgamated using the components of compassion fatigue, burnout, and aspects of turnover intention literature. This study was designed to examine the relationship between compassion fatigue and burnout to turnover intention in nurses employed by trauma centers. Burnout due to compassion fatigue and unfavorable working conditions is a significant motivation why trauma medical personnel in the nation quit their jobs (Munnangi et al., 2019).

The framework for this study originates from the Professional Quality of Life (PQL) Model by Stamm (2009) and the Compassion Stress/Fatigue Model described by Figley (2001).

Figure 1*PQL Model****Professional Quality of Life (PQL) Model***

The general idea of PQL is multifaceted because it is related to physiognomies of the occupational setting (institutional and responsibility wise), the person's attributes, and the person's contact to direct and indirect trauma in the occupational setting. The fundamentals of PQL are comprised of compassion satisfaction, compassion fatigue, and burnout. Figley (2001) defined compassion fatigue (CF) as "a state of exhaustion and dysfunction, biologically, physiologically, and emotionally, as a result of prolonged exposure to compassion stress" (p. 34).

Occupational-related trauma has a unique quality of anxiety-related alongside it. Ultimately, the physical and mental condition of the healthcare provider can be diminished, resulting in burnout. Burnout is related to feelings of hopelessness and complications in dealing with work or in performing your job successfully (Stamm, 2009). These detrimental emotions typically occur over time. They can suggest the impression that your determinations are ineffective, or they can be linked with an elevated workload or a discouraging occupational

atmosphere. Compassion satisfaction (CS) is the positive attribute of serving others, and CF is the negative aspect of helping others. The occupational setting and the customer (or patient) all have a functional role. Three dynamics that place healthcare professionals interacting with patients in trauma settings at higher risk for CF are (1) having a history of traumatic experiences, (2) being empathetic, and (3) having unresolved trauma (Figley, 2001; Molnar et al., 2017; Sorenson et al., 2016). Elements that influence the seriousness of these indicators include the possibility for recurrence, the length of the involvement, whether the worker was exposed to mourning, dying, or disaster, and the grade of ethical disagreement. Other instrumental elements are thoughts of professional seclusion, psychological drain from empathizing, extended periods with limited resources, unreturned benevolence, and thoughtfulness, and failure to live up to one's expectations for effecting positive change (Figley, 2001).

While compassion fatigue defines some of the work-related risks of nursing, compassion satisfaction (CS) includes the gratification and appreciation that matures from delivering care to patients (Mattioli et al., 2018). Nurses can gain CS through actions that help revive or restore their desire for caring for patients (Gerard, 2017). These instances reset nurses to their original determination or meaning, offering a vigor that helps mitigate or alleviate CF and encourage CS (Gerard, 2017). Furthermore, it has been discovered that mindfulness, self-rejuvenation, and actions of health promotion foster CS (Knaak et al., 2017). Studies concerning the influence of meaningful acknowledgment has determined that nurses getting this variety of recognition about their performance have experienced moods connected with pride, honor, revitalized passion for the occupation, and improved satisfaction (Gerard, 2017; Hunsaker et al., 2015).

Compassion Fatigue Model

Joinson (1992) first acknowledged compassion fatigue as a distinctive form of burnout

primarily connected to caregiving professions, specifically nursing. Expounding on Joinson's work, Figley (1995) argued that compassion fatigue is a natural consequence of interacting with individuals who have experienced tremendous stressful occurrences. Consequently, professionals who possess an increased capacity for experiencing and conveying empathy are more susceptible to compassion stress (Figley, 1995). Workers who do not directly experience a patient's trauma may exhibit symptoms vicariously through the patient. The literature refers to this cost of caring as secondary traumatic stress (STS), secondary stress disorder (STSD), or compassion fatigue (Morrison & Joy, 2016). Figley (1995) defined it as "It is the stress resulting from helping or wanting to help a traumatized or suffering person" (p. 7).

An analysis of the literature reveals that Figley (1995) characterized an arrangement of compassion fatigue responses into three fundamental categories professionals who work with trauma victims often display. First, exhibitions of emotional distress happen and involve (a) emotions (sadness, depression, anxiety, or dread), (b) nightmares or negative images, (c) sleep difficulties, (d) headaches, (e) gastrointestinal suffering, (f) obsessive behaviors, (g) physiological symptoms of palpitations and hyperventilation, and/or (h) impairment of daily activities. Next, a perceptive modification results in professionals who experience feelings of intense powerlessness and heightened susceptibility. Third, interpersonal disruptions, the process of estrangement and disconnecting from friends, family, and coworkers may also transpire.

Figley (1995) distinguished between burnout and compassion fatigue. Burnout is a progression, instead of a fixed circumstance. The development contains repetitive introductions to occupational tension coupled with reduced hopefulness and deficiency of accomplishment. Burnout cultivates during an extended period and gradually worsens while compassion fatigue may develop unexpectedly and is severe (Figley, 1995). Stamm (2002) described compassion

fatigue's damaging effects: "The theory of secondary or vicarious traumatization records the deleterious effects of being in harm's way as an act of compassion. We have come to know that this saga can be heroic, tragic, or even dangerous" (p. 107). Additional distinctive qualities exclusive to compassion fatigue are seclusion from loved ones, a feeling of powerlessness, and bewilderment. Indicators are often detached from actual sources.

A case can be made that analyzing trauma nurse attrition through the stress/burnout perspective does not explain individuals who continue their career and yet display the stress/burnout associated indicators. A clear relationship between compassion fatigue, burnout, and turnover intention in nurses in trauma centers has never been empirically authenticated. Researchers who have focused on compassion fatigue encompassed subjects such as healthcare workers, criminal victimization survivors, sexual violence survivors, torture survivors, and social workers (Deighton et al., 2007; Kellogg et al., 2018; Schauben & Frazier, 1995; Sorenson et al., 2017; Stalston & Figley, 2003).

Compassion Fatigue and Turnover Intention

Compassion fatigue among trauma nurses was assessed to consider its relationship with turnover intentions. The research addressed the issue of burnout among nurses and sought to link that to the reasons why they leave their employment. Additionally, the research examined the connection between turnover intentions in trauma nurses and the type of work they are engaged in daily. Dealing with people who have gone through traumatic episodes in life requires compassion, patience, and emotional intelligence (Noffsinger, 2014). Nurses who take care of trauma patients can experience stressful moments that require to be addressed before it escalates and affects their performance at work. Therefore, this study was conducted to determine whether there is a statistically significant relationship that exists between compassion fatigue and burnout

and turnover intention among trauma center nurses.

The independent variables used in this research include compassion fatigue and burnout among practicing nurses. The research used turnover intention in trauma nurses as the dependent variable. The study investigated how compassion fatigue is a significant issue in the profession and why the problem continues. Additionally, specific demographics such as age and years of experience play a central role in determining the degree of the effects of compassion fatigue and burnout in an individual. Based on the Professional Quality of Life (PQL) Model by Stamm (2009) and the Compassion Stress/Fatigue Model described by Figley (2001), a theoretical framework related to CF, burnout, and turnover intention among nurses employed by trauma centers was established to outline this research. The researcher believes that personal and institutional attributes may cause and have an effect on the development of CF and burnout. Figure 1 below represents a diagrammatic representation of the variables. The hypotheses suggest there is a statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses.

Definition of Terms

This section functions to distinctly define key terms and concepts discussed in the research study. Explanations of these terms are intended to explain for the reader the essence of fundamental components found at the core of the study.

Burnout (BO): Maslach and Jackson (1984) defined burnout as “emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur in professionals who do people work of some kind” (p. 1).

Compassion fatigue (CF): The phrase used to characterize the state of exhaustion which restricts the capacity to engage in caring relationships (Nolte et al., 2017).

Compassion satisfaction (CS): The expression compassion satisfaction defines the sensation of gratification that results from the practice of serving others, which reminds the performing caregiver about the philanthropic motives that influenced them to join the profession (Radey & Figley, 2007; Stamm, 2002).

Depersonalization (DP): Characterizes disconnected and impersonal treatment of patients (Maslach & Jackson, 1981).

Emotional exhaustion (EE): Emotional exhaustion explains feelings of being emotional exhaustion due to performing work (Poghosyan et al., 2009).

Personal accomplishment (PA): Beliefs of capability and effective achievement at the workplace (Poghosyan et al., 2009).

Secondary traumatic stress (STS): The development of posttraumatic stress disorder (PTSD) in healthcare workers and involves emotions and behaviors experienced as a consequence of exposure to another's trauma (Hinderer et al., 2014).

Turnover intention: Turnover intention is defined as “the last in a sequence of withdrawal cognitions, a set to which thinking of quitting and intent to search for alternative employment also belongs” (Tett & Meyer, 1993, p. 262).

Assumptions, Limitations, Delimitations

Assumptions

The main assumption for this study is that registered nurses who participate in the study answer the questions truthfully and honestly. Examining compassion fatigue and burnout involves acquiring data concerning an individual's personal feelings, emotions, and attitudes about experiences as an employee of a specific healthcare facility, so there were some risk that individuals may not have given candid responses due to anxiety of employer retaliation. In order

to alleviate this risk, the researcher afforded survey participants assurance of anonymity. The nature of the study required the responses attained from contributors to be utilized without question, and therefore, all responses provided by participants was recognized as delivered, and were not scrutinized or authenticated in any way. The investigator's methodology toward compassion fatigue, burnout, and turnover intention was congruent with ethical perspectives adopted for this research and with existing research in the leadership and human resource domains (Hinshaw et al., 1985; Maslach & Jackson, 1984; Stamm, 2009). The instruments used in the study were suitable to collect, measure, and analyze the variables. The survey instruments have been established to be valid and reliable.

Limitations

One limitation of the study is the absence of generalizability. The study focused on trauma center nurses in the state of Alabama, and thus, the conclusions drawn from the study will not automatically apply to other trauma centers or health systems. Regional or local trauma centers, or trauma centers of different sizes, may generate different results if the study were performed within those organizations. The awareness of these prospective study limitations delivers areas for future research. In addition, the measure of compassion fatigue, burnout, and turnover intention will be restricted by the participants' motivation to cooperatively and truthfully answer questions that measure compassion fatigue, burnout, and turnover intention.

A contributor's psychological attitude, setting, and specific conditions may affect his or her readiness to participate and respond openly and honestly. This research necessitates that contributors complete the entire survey. If a survey was incomplete or only partially completed, then the survey data were not included in the study. The contributor's existing occupational environments, including whether he or she is in the midst of a particularly challenging or

stressful situation, may cause the outcomes to be biased negatively; consequently, the replies may not characterize the nurse's normal or baseline level of compassion fatigue, burnout, and turnover intention. Furthermore, recency bias may be a factor as a participant's current circumstances could have impacted responses and affected results.

The study contains an intrinsic threat of common method bias (CMB) because all data were gathered by means of self-reporting surveys. Similar to other non-probability sampling techniques, there is the possibility for sampling bias (Jordan & Troth, 2020). While practical methods decrease the probability of CMB, there is no assurance that it will be removed (Shi et al., 2019). Correct design, research philosophies, statistical computations, result interpretation, and analysis were performed in order to diminish misinterpretation and misrepresentation of research outcomes.

Delimitations

The study measured the burnout of trauma nurses employed by trauma centers in the state of Alabama. Employees of other trauma centers in other states were included in the study. The conclusions from the study apply only to trauma center nurses within one state. The first delimitation of this study is that it only includes geographical locations in Alabama. Because the state of Alabama includes multiples trauma centers, the researcher had greater access to a large population. Fowler and Lapp (2019) contend that an insufficient representation of the population could alter the accuracy of the research. Consequently, having access to various hospitals assisted in obtaining an optimal sample size to attain the statistical power needed to attain the validity of the study.

The second delimitation is the selection of strictly registered nurses because they play a crucial role in trauma center operations and patient care delivery. Although registered nurses

work in diverse healthcare settings, for this research study, they had to meet specific criteria. Standards for the recruitment of each contributor will be (a) employment as a registered nurse, (b) full-time at a trauma center in Alabama. The exclusion criteria will exclude (a) nonregistered nurses, (b) registered nurses employed by schools, jails, outpatient healthcare facilities, and/or nursing homes. The third delimitation included examining the relationship between the variables of compassion fatigue, burnout, and nurse turnover intention using the three validated instruments (Leung et al., 2014). Choosing validated instruments intensifies the reliability for use in research studies. These delimitations describe judgments for this research study.

Significance of the Study

The findings of this study may serve as an essential step on the path to decreasing employee turnover in trauma centers in the healthcare industry. The United States spends the highest percentage of gross domestic GDP, about 17.9%, on healthcare, more than any other country in the world. Johnson (2018) validated the need to increase the base of knowledge regarding organizational retention strategies. While a noteworthy quantity of research has been conducted associated with compassion fatigue and burnout in other disciplines and professions, the connection between compassion fatigue and burnout and turnover intention of nurses in trauma centers is understudied. Reducing turnover intentions through mitigation of compassion fatigue and burnout could lead to a more efficient and resourceful organization that benefits both staff, leaders, and patients (Brimhall, 2019; Knapp et al., 2017). As leaders scrutinize foundations of compassion fatigue and burnout, substantiation that these elements affect retention may exist. These indications can be used to develop management interventions and supports to retain nurses, reduce institutional costs, and optimistically influence patient care.

Additionally, the study is pertinent to the study of human resources in healthcare, nursing, health services administration, and healthcare patient and safety, as evidenced by the effects of burnout on human resource responsibilities such as employee retention, employee tenure, employee engagement, and voluntary turnover (Kutlurkan et al., 2016; Macken & Hyrkas, 2014; Mijakoski et al., 2015; Sozeri et al., 2016). The conclusions from this study may justify that compassion fatigue and burnout have quality and cost implications for healthcare organizations. The cost association of compassionate fatigue and burnout is the association with reduced productivity and consequently quality concerns. According to Gerard (2017), the annual economic cost lost to productivity due to compassion fatigue is billions of dollars. If the findings of this study do not support these assertions, then future researchers may have a reference point for impending studies involving compassion fatigue, burnout and turnover intention.

Reduction of Gaps in the Literature

Although there seems to be extensive peer-reviewed literature regarding the impact compassion fatigue and burnout in healthcare workers, and employee turnover intentions (Berger et al., 2015; Kelly et al., 2015; Meyer et al., 2015; Sung et al., 2012; Wu et al., 2016), this researcher was unable to locate literature that pertains explicitly to trauma centers in the United States. The sample population includes nurses employed by trauma centers in the state of Alabama. This study will help to narrow the gap in the literature.

Implications for Biblical Integration

The biblical facet of this study relates to the notion that leaders should administer their leadership shrewdly and effectively. Solomon tells us in Proverbs 27:12, “The prudent see danger and take refuge, but the simple keep going and pay the penalty” (NIV). This is translated as practical leaders will see difficulty approaching and avoid it, but an unprepared leader will

encounter trouble and feel remorseful later. Keller and Alsdorf (2012) suggested that a fundamental idea to consider is to pursue every good endeavor according to God's intent; thus, the efficiency of work will matter considerably to God.

The importance to God is to make his creations to carry work according to his authority and mission. Keller and Alsdorf (2012) further asserted that without meaningful and continual work, the significance of life is lost. Consequently, one can assume that if workers are not engaged, productivity, quality, and satisfaction will lessen. Nevertheless, a person should not convert work into the complete meaning of life as then it becomes an idol before God; accordingly, there should be a productive equilibrium in order not to adhere to God's purpose (Sandelands, 2017). The Bible inspires readers to work hard and to do so with devotion. Ecclesiastes 9:10 teaches "Whatsoever thy hand findeth to do, do it with thy might; for there is no work, nor device, nor knowledge, nor wisdom, in the grave, whither thou goest" (KJV). This reassuring verse prompts us to commit to our occupation.

One of the earliest biblical illustrations of work presented is when God put Adam, the first man, in the Garden of Eden to oversee it. "And the Lord God took the man and put him into the Garden of Eden to dress it and to keep it" Genesis 2:15 (KJV). Although the Bible urges us to work hard, it also emphasizes for us not to stress. Philippians 4:6-7 (NIV) urges,

Do not be anxious about anything, but in every situation, by prayer and petition, with thanksgiving, present your requests to God. And the peace of God, which transcends all understanding, will guard your hearts and your minds in Christ Jesus.

God desires His followers to be enlightened in the work setting, not stressed and worried. Compassion fatigue and burnout result when a worker has been dispirited and abandoned interest in prospering or no longer feels accomplished in the workplace. Employees who exhibit positive

workplace engagement are less likely to leave (Narayanan et al., 2019). This is exceptionally significant for any organization because of the associated expenses of recruiting, hiring, and onboarding a new employee (Ahammad et al., 2016). Moreover, departing employees deprive an organization of technical and institutional knowledge, which may take time for new employees to learn. Conclusively, organizations should aim to identify practices to keep personnel encouraged and engaged because it is God's intention for humans in business, and also because an inspired workforce tends to be more productive.

Benefit to Business Practice and Relationship to Cognate

The discipline of healthcare management faces numerous challenges. Compassion fatigue and burnout have a significant influence on employees' personal and professional life; they face decreased quality of life, mental health decline, decreased work productivity, and an elevated risk of substance abuse, thoughts of suicide, and increased medical errors (Zaninotto et al., 2018). This research is essential in helping improve employee engagement, reduce turnover, improve efficiency, and improve healthcare quality. The problem is that in most cases, burnout is ignored or misunderstood, which in turn comes with the implication that little effort will be put into the implementation of strategies to solve the problem. The findings from this study aim to help in the identification of some of the key triggers in trauma centers that contribute to compassion fatigue and burnout in trauma center nurses in the state of Alabama.

Compassion fatigue and burnout do not only impact on the work performance of the personnel but also affects their physical and mental health. Some of the health problems associated with compassion fatigue and burnout include headaches, sleep problems, high blood pressure, and cardiovascular illnesses (Van Bogaert et al., 2013). Studies show that nurses, in particular, often take more days off work compared to individuals in other professions

(Wilkinson et al., 2017). Recognizing causative influences on the development of compassion fatigue and burnout may assist in early detection and development of preemptive methods to ensure the field of healthcare management devises strategies to contain costs, improve employee engagement, and increase healthcare quality and safety.

A Review of the Professional and Academic Literature

Working in stressful environments such as a trauma center has been identified to be an emotionally charged challenge that can impact negatively on the emotional stability of nurses (Van Mol et al., 2015). The available evidence indicates that compassion fatigue and burnout among nurses working in trauma centers is remarkable due to the demanding and high-continuous stress work environment. Nurses are often required to exhibit the ability to provide compassionate care to patients with various types of issues (including physical and psychosocial issues) even when resources are limited. The nurses working in trauma centers and other specialty areas of practice are prone to suffer compassion fatigue and burnout due to their increased exposure to patient trauma, the stressful working conditions, and the lack of proper resources to cope (Denigris et al., 2016).

The stressful experiences cause emotional exhaustion, which leads to compassion fatigue, and may subsequently lead to chronic burnout (Cetrano et al., 2017). Different instruments have been developed to measure the concepts of compassion fatigue, burnout, and turnover. For instance, with regards to compassion fatigue, the Compassion Fatigue Scale (CFS) was originally developed but has, in the recent past, been succeeded by the Professional Quality of Life Scale (Deighton et al., 2007). Other critical scales and theories that will be used in this literature review include the Maslach burnout theory, Cherniss burnout theory, March and Simon's model, and Mobley's model. Given the significant role played by nurses in enhancing the care of

patients in trauma centers, there is a need to understand the correlation between compassion fatigue and burnout to turnover intention among the nurses. This will aid in the identification of effective strategies to reduce compassion fatigue and burnout, and in the process, reduce turnover in trauma center nurses, which negatively affects organizational costs.

The subsequent literature review combines philosophies and assessments relating to the examination of relationships between compassion fatigue and burnout to turnover intention in trauma center nurses. Structured into multiple parts, the literature review examines the challenges of nursing shortages, assesses nurse turnover intentions, highlights the origins of compassion fatigue and burnout, discusses the implications of compassion fatigue and burnout on turnover intention, and summarizes overall themes from the literature. The review then concludes with a discussion of the study, next steps, and transition.

National Nursing Shortage

The nursing profession in the United States continues to experience shortages due to various factors, including the lack of adequate educators, inequitable distribution of workforce, and high turnover rates. The aging population in the US has placed significant pressure on the nursing workforce and is believed to be one of the key reasons for the nursing shortage. Currently, the US is reported to have the highest number of individuals aged over 65 years than any other time in history (Haddad & Toney-Butler, 2019). In 2014, the population of elderly individuals in the US was reported to be approximately 46 million. By 2029, it is expected that there will be a 73% increase in the number of older Americans (Haddad & Toney-Butler, 2019). The increase in the number of the aging population means that the demand for health services increases, and consequently leads to a nursing shortage.

Another critical concern associated with a nursing shortage in the US is the aging workforce. According to a recent study, there are approximately one million RNs who are over 50 years in age. This implies that 30% of the workforce will be facing retirement in the next decade (Buerhaus et al., 2017). This also presents a significant problem of a nursing shortage due to the limited resources available to train more nurses. It is reported that the nursing faculty is experiencing a scarcity that has resulted in limitations in enrollments and subsequently reducing the number of nurses produced by nursing schools (Snaveley, 2016). According to a report by the American Association of Colleges of Nursing (AACN; 2019), schools in the US declined to give admissions to about 75,029 applicants who had qualified for the nursing course in 2018 due to inadequate resources, faculty, funding, and classroom space. This is considered to be one of the central prompts for the continued nursing scarcity in the US.

The challenge of a lack of nurses is also intensified by the problem of burnout in the workplace. It has been observed that upon entering their work environment, new graduate nurses experience heavy workloads and a highly demanding work environment. The nurses work for a short period of time, and upon experiencing burnout, they leave the profession. The current national average for turnover rates is estimated to be between 8.8% and 37% (Haddad & Toney-Butler, 2019). These values differ depending on the nursing specialty and geographic location. The nursing shortage has led to increased nurse-to-patient ratios in the various healthcare facilities. This impacts the quality of the professional life of nurses and subsequently leads to nursing burnout. There is also evidence that the nursing shortage is affecting the quality of work-life of nurses as well as the quality of patient care (Lipstein & Kellermann, 2016).

Nursing Shortage in Alabama

The shortage of registered nurses is a global concern, especially for countries with aging populations and high morbidity propensities. Haddad et al. (2020) noted that poor health outcomes in most states in America result from a shortage of registered nurses, with many regions conditioned to operate with a perennial inadequacy of vital personnel in health care provision. Similar to other parts of the United States, Alabama faces a significant shortage of registered nurses.

According to Haddad et al. (2020), the need for nurses in the State of Alabama will grow by over 10% in the next ten years due to the projected rise in cases of chronic diseases, the growing requirement for preventive care and the increase in population. The statistics indicate that the country will have a supply of approximately 85,000 registered nurses against a demand of 79,500. Alabama had about 44,000 registered and active nurses in 2018, with over 30% working in Birmingham. The recent changes by the Alabama Board of Nursing to allow nurses from other states to work in its healthcare system improved the supply for registered nurses.

Since 2019, the state has witnessed a rise in the number of travel and temporary nurses with multistate licenses. However, the increasing needs for healthcare services across all ages continue to put more pressure on healthcare facilities, learning institutions, and governments to address the shortage of healthcare professionals. The healthcare sector's major stakeholders, such as policymakers, nursing schools and organizations, and media outlets, continue to focus on this healthcare concern to initiate and sustain efforts to address the shortage. The state is collaborating with nursing schools to ensure the expansion of faculties and facilities to admit and graduate nurses who can easily fit in the US healthcare market (Haddad et al., 2020). The state is

also focusing on career support and development to attract and retain more nurses considering that staff attrition is a significant cause of the nursing shortage in Alabama.

Turnover Intention

Turnover intention can be defined as the psychological and behavioral tendency in which employees seek to leave their current profession or organization (Chen et al., 2018). Turnover intention can pose a substantial barrier because it may lead to the loss of trained staff, and it may be more problematic when the supply of skilled and knowledgeable workers is limited. Turnover intention among nurses is a major concern globally and is influenced by the intent of nurses to leave their jobs. The turnover rates of nurses are reported to be higher in the US and can attain levels such as 10-20% (Boamah & Laschinger, 2016). Turnover intention can be detrimental to the nursing practice because the profession is facing a mass departure of baby-boomer nurses who are close to the retirement age (Fasbender et al., 2019). The need to decrease and alleviate turnover among nurses has led to many studies being carried out that focus on the factors that influence turnover as well as the challenges of turnover.

Nature of Work in Nursing

Nurses play a critical role in providing patient care, promoting good health, and preventing illnesses. Nurses use their knowledge, their experience, and considerable judgment in executing their duties. Although the work environment and working conditions may vary with the place of employment, almost all the nursing jobs involve making contact with people. As such, nursing involves working for prolonged periods meeting the demands of patients, and ensuring that they provide safe and quality care. Studies have shown that nursing is one of the most demanding professions, with nurses facing a high degree of job stress. Nursing involves caring for the sick and maintaining the environment in which care occurs. Nurses are also tasked

with fulfilling specific aspects of medical treatment delegated to them by doctors, such as administering medications. Moreover, the scope of nursing practice is complementary to that of doctors, and it includes assessing and intervening in their specific areas of expertise.

A characteristic feature of nursing work in the majority of countries globally is that nurses are expected to provide care under stressful conditions. Nurses are faced with common challenges that include understaffing, prolonged working hours, and handling a high number of patients. These contribute to increasing the levels of burnout and job dissatisfaction among nurses. In addition to being tasked with providing care to a high number of patients, nurses may be required to assume more responsibilities, such as managing services and other staff within their units. This takes away some critical time that they would use to provide direct patient care. A large number of nurses have reported spending time executing duties that are not related to their professional training, such as cleaning rooms and transporting food trays. Engagement in additional activities increases the pressure on nurses to complete the different tasks within a short time while being required to maintain quality care.

Influences and Challenges of Turnover Among Nurses

Nursing turnover has, in the past few decades, been a fast-growing human resource problem in the majority of the healthcare organizations globally. The rate of turnover across the world is considered to be high, and it ranges from about 15% to 44% (Roche et al., 2015). Turnover intention among nurses can result from various factors, including individual, organizational, or job characteristics. All these dynamics can influence job satisfaction and turnover intention.

Staffing is an organizational factor that can influence nursing turnover. A large number of nurses are prone to leave hospitals when they feel the institution does not have adequate staffing

levels. Inadequate staffing levels mean that the available nurses have to bear the burden of providing care to patients. Hospitals can also have adequate staffing levels but poorly organized units. Studies have also shown that nurses can exhibit the intention to leave if they are inequitably assigned duties, or if they are made to perform more difficult duties compared to their colleagues (Nantsupawat et al., 2017).

The lack of administrative support can also stimulate the intention of nurses to leave their jobs. When nurses do not receive the expected level of respect from their leaders or if they are not involved in decision making on critical matters that directly affect their practice, they are more likely to show intent to leave (Abou Hashish, 2017). Another critical aspect that may affect nursing turnover is the perception of leadership not addressing occupational concerns, or failure to remedy the issues that they face while performing their duties. A poor doctor-nurse relationship can also increase the level of job dissatisfaction among nurses due to ineffective communication. Effective communication between interdisciplinary teams in hospitals is critical for the delivery of quality and coordinated care to patients (Lee et al., 2016).

Limited opportunities for career advancement are a key contributing factor to nurse turnover in hospitals (Baum & Kagan, 2015). When nurses feel that there are limited chances for internal promotion and career advancement, they may be forced to leave their positions and seek opportunities elsewhere. Further, the lack of recognition for their efforts and the absence of appreciation for meeting the required targets in terms of productivity can lead to increased nurse turnover. The available evidence indicates the lack of competitive compensation systems can lead to increased rates of turnover in organizations (Baum & Kagan, 2015). Nurses may be displeased with their compensation, particularly in cases where their supplementary nursing credentials are not taken into consideration (Tourangeau et al., 2017). Ensuring the salaries paid

to nurses are commensurate to their academic qualifications can help to curb this problem, while enhancing job satisfaction (Baum & Kagan, 2015). Nursing turnover can also be linked to personal motives. Personal aims that are given by nurses in order to leave their jobs do vary, and they may include family reasons, pursuing further education, and accepting jobs from other organizations. Other key personal motivations that have been linked to increased turnover among nurses include salary issues, communication barriers, uncomfortable work environment, and lack of job satisfaction (Dewanto & Wardhani, 2018).

Nurse turnover presents significant challenges to nurse leaders and the hospital administration. To begin with, it has been shown that nursing turnover disrupts the workflow of hospital services. For instance, it impedes the delivery of safe and quality care to patients. Furthermore, turnover also disturbs critical procedures, such as staffing processes and managerial practices. Turnover is a significant challenge for hospitals because it can be challenging to find replacement personnel who meet similar skill criteria and qualification standards. Patients can also be impacted by staff turnover. Findings from the study carried out by Dewanto and Wardhani (2018) indicated that patients were frustrated if they were aware that an institution had high nursing turnover. This is due to the fact that they felt that they would not receive competent care from the new nurses. As a result, it leads to decreased patient satisfaction. Moreover, it brings about difficulties in the development of trust, working relationships, and teamwork among nurses. Additionally, turnover causes staff shortage and increased workload, overtime, and anxiety on nurses who remain behind (Moloney et al., 2018). The amplified workload and the need to work overtime in order to cover for the lost staff can reduce the morale of the persisting nurses, which may, in turn, result in additional turnover (Moloney et al., 2018).

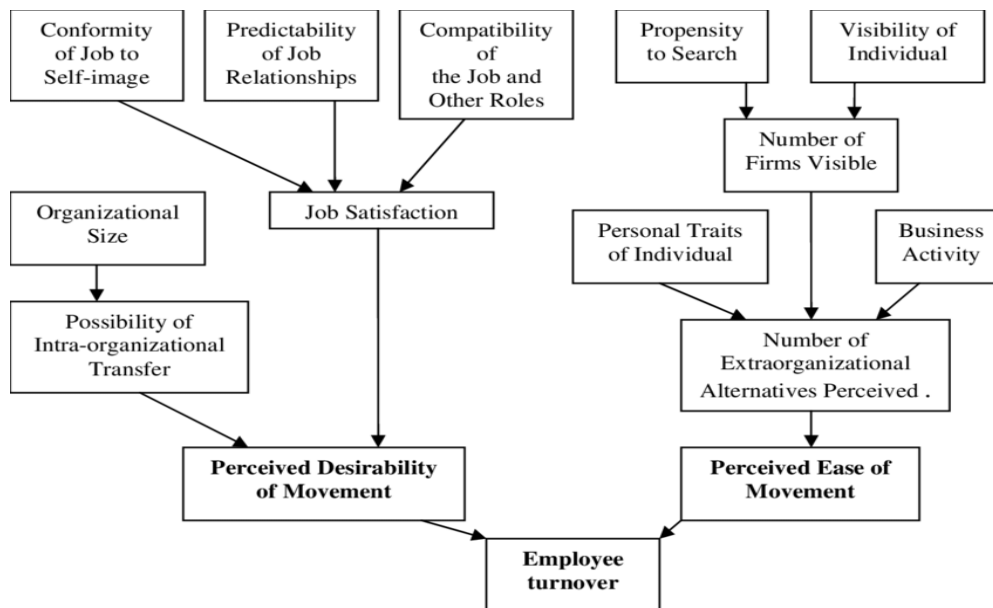
Job Satisfaction

March and Simon (1958) are credited with formulating the theory of organizational equilibrium. This theory emphasized the significance of balancing employee and organizational contributions as well as inducements. March and Simon's model linked turnover decisions to job satisfaction among individuals. As such, it suggested that people who were more satisfied with their jobs exhibited increased likelihood to remain with their organizations (Tosi, 2008).

The theory of organizational equilibrium holds the view that so long as an organizations meet the financial needs of its employees and pay monetary inducements that match or exceed the input made by individuals to their organizations, the individuals will remain loyal members of the organizations (Ngo-Henha, 2017). According to this theory, there is need to individuals and organizations to strive to maintain a state of equilibrium between the amount of inducements given and the amount of work that individuals can deliver. The critical factors that determine the loyalty of employees include perceived desirability and perceived ease of exiting the organization (Bromiley et al., 2019), as illustrated in Figure 2 below.

Figure 2

Illustration of March and Simon's Model (Tosi, 2008)



The concepts presented by the model are currently referred to as job satisfaction and the available alternatives in the external market. The two factors function to independently affect the intent of the employee to either stay or leave their organizations. It has been established that when the work requirements of individuals align with their work responsibilities, they exhibit increased job satisfaction, and consequently increases their likelihood of remaining with their organizations (Egeberg et al., 2016).

Financial Impact of Turnover on Hospitals

The available evidence indicates that nursing turnover results in significant financial burdens for healthcare organizations. The cost of nurse turnover can have a substantial impact on organizational profit margins. According to findings of the National Healthcare Retention and RN Staffing Report of 2016, the average cost of nurse turnover in the US is approximately \$37,800 to \$58,000 (Nursing Solutions Inc., 2016). The costs of nurse turnover are obtained by taking into consideration various aspects, including conceptual differences such as study designs

and methodological differences. The turnover costs are estimated to range between 0.8 and 2.0 times the salary of the departing nurse. Replacement costs for nursing positions are equivalent to or greater than two times a regular nurse's salary (Richards, 2016). The estimates, however, may vary based on various factors such as education, tenure of the departing nurses, experience, and the period during which the nurse departs. The costs of nurse turnover have been shown to be more costly compared to the benefits.

Kurnat-Thoma et al. (2017) indicated that it is difficult to calculate the financial cost of nursing turnover. Analyzing this question, the authors have pointed about the range from \$10,098 to \$88,000 to replace a nurse. The major reasons of such difference are the cost categorization and conceptualization processes. Much depends on the factors and parameters taken into consideration as a part of one's strategy. The authors have referred to various healthcare facilities and indicated the differences in about \$2 million. The causes for such differences are in the qualification of the staff, the number of nurses, and the cost of recruitment for one person. Kurnat-Thoma et al. (2017) have also stated that turnover is an expensive factor in healthcare facility, and administration should not ignore it.

Analyzing the situation of nursing turnover in healthcare facilities and its influence on costs, Dewanto and Wardhani (2018) indicated the major hospital expenses in this question are related to the finances spent on preparing new nurses. This process usually involves recruitment, mentoring, training, and placement itself. It usually takes much time and effort to find a new nurse. The human resources management has to spend time of reaching CVs, interviewing new nurses, and making some general arrangements in terms of law to accept a new employee. At the same time, it is also important to discharge the past employee following all the legal procedures. Next, a new nurse should receive some basic training as there are differences in how work takes

place in this or that facility. All these procedures take not only time but also money as they require much staff to cooperate and spend working resources.

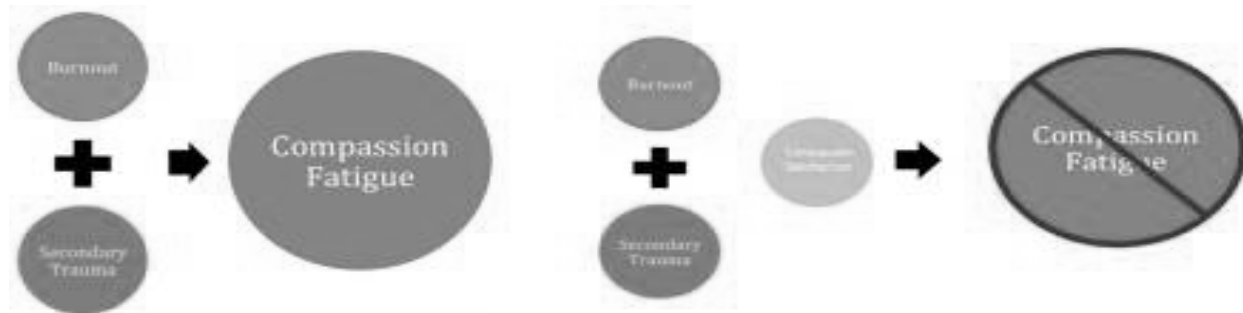
Compassion Fatigue (CF)

Compassion fatigue (CF) is a state of physical or psychological stress suffered by nurses, which occurs due to exposure to patients' suffering, especially those exposed to traumatic events. It is characterized by the state of exhaustion, which restricts the capacity to engage in caring relationships (Nolte et al., 2017). CF occurs due to secondary stress, and it is identified as a state of tension that involves preoccupation with the trauma of patients (Van Mol et al., 2015). As such, CF is used to describe the stress resulting from exposure to traumatized patients as opposed to exposure to the trauma itself (Cocker & Joss, 2016). The key characteristics of CF include exhaustion, anger, and irritability, reduced ability to feel sympathy or empathy, reduce the sense of enjoyment, reduced job satisfaction, impaired ability to make decisions, negative coping behaviors (alcohol and drug abuse), and increased absenteeism (Nolte et al., 2017).

Various descriptions of CF have been presented in studies with CF being identified to burnout (BO), and secondary traumatic stress (STS) are usually used incorrectly and interchangeably to describe CF. It is worth noting that BO and STS are two distinct outcomes of exposure (Stamm, 2010). BO and STS occur as a result of separate failed survival strategies. However, both BO and STS lead to the onset of CF if the symptoms are not mediated by compassion satisfaction (CS), as illustrated in Figure 3.

Figure 3

Conceptual Model of Compassion Fatigue (Cocker & Joss, 2016)



CF is known to have an acute and insidious onset that results in the development of long-term consequences that are highly irreversible. Burnout, on the other hand, has a quick commencement and resolution, and as such, the elimination of a trigger can help decrease the effects of burnout (Kim et al., 2017). The commonly used definition of CF was coined by Figley, who described it as a state of exhaustion and dysfunction either biologically, socially, or psychologically due to prolonged exposure to compassion stress (Figley, 2001). CF is quantified by utilizing the Professional Quality of Life (ProQoL) scale. ProQoL refers to the quality of feelings exhibited by individuals with regards to their work as nurses or caregivers (Sacco et al., 2015) and, as such, the positive and negative aspects of engaging in nursing practice are outlined.

Professional Quality of Life Model (ProQol)

The ProQoL was developed by Stamm in collaboration with Figley (2010). Stamm's model sought to address the areas that were not covered in the original model by Figley, including work-life balance. Moreover, the new model served to provide a means of evaluating the organizational and environmental impact on nurses. Stamm introduced the concept of compassion satisfaction and described it as the enjoyment or fulfillment achieved by a nurse in the process of caring for patients (Kelly & Lefton, 2017). As outlined earlier, CF comprises of two subcategories, burnout and secondary stress. The state of CS or CF of a nurse can be

affected either positively or negatively by the nature of work, work environment, and relationships. The interaction of nurses with these aspects can be positive, leading to the development of a sense of satisfaction, or negative, leading to a state of fatigue. The ProQoL tool developed by Stamm plays an important role in measuring these concepts (Heritage et al., 2018).

The ProQoL model is based on Figley's CFS. While developing the ProQoL manual, Stamm observed that this scale would help address the various difficulties involved in separating burnout and secondary stress. The accurate measurement of the constructs contained in ProQoL should be critically taken into consideration by the managers and employers of nurses. Given that ProQoL is an important screening and research tool, it has been shown to have psychometric rigor (Heritage et al., 2018).

Compassion Fatigue in the Nursing Profession

The role of nurses can be stressful and challenging because nurses are often exposed to distressing situations or environments during practice. Despite the stress and challenges, nurses have the responsibility of providing quality and meaningful care to all their patients. This, in turn, exposes nurses to compassion fatigue (Ledoux, 2015). The significant exposure of nurses to compassion fatigue can have a destructive influence on their ability to accomplish their professional obligations and duty of care. This is because nurses are placed in emotionally distressing situations that enhance their risk of emotional depletion (Wilson et al., 2017). For nurses who experience CF, there is a high probability that they will not recover because of the complete depletion of their compassionate energy (Coetzee & Laschinger, 2018).

Compassion fatigue among nurses in different departments, including the emergency department, oncology nurses, intensive care unit nurses, and ward nurses, have been described. Reporting on the prevalence of CF in healthcare providers, Bao and Taliaferro (2015) indicated

that approximately 30% of healthcare professionals, including nurses, exhibited the various symptoms of CF. The prevalence of CF has been reported to be higher among nurses that are frequently exposed to trauma and death (Salmond et al., 2017; Salmond et al., 2019). This implies that nurses working in critical care, as well as those working in oncology, emergency, and trauma centers, are at a higher risk of CF.

According to Yoder (2010), about 78% of hospice nurses were reported to be at medium to high risk of CF. Nurses providing care to children with chronic diseases were found to be at high risk of CF. Other nurses at high risk of CF include the ICU and trauma center nurses. The key triggers of CF in these nurses are work-related with key aspects being caring for patients with chronic conditions, trauma patients, and increased work-load (Maytum et al., 2004; Nolte et al., 2017). It is, therefore, apparent that nurses in diverse specialties can be affected by compassion fatigue in the process of delivering patient centric care and support (Peters, 2018).

CF is reported to be highly prevalent among nurses in the millennial generation (those aged between 21 and 33 years; Kelly et al., 2015). Given that approximately 30-50% of all the new registered nurses opt to either change their positions or leave nursing practice completely within the first three years of employment, there is increased speculation that CF may be a contributing factor (MacKusick & Minick, 2010). MacKusick and Minick (2010) sought to examine the reasons why nurses left the bedside, and various themes were identified, with the key themes being emotional distress, fatigue, and exhaustion. Findings from the study showed that nurses reported exhibiting feelings of hopelessness and emotional distress which led to either call in sick, search for other positions, or completely leave the profession. Nurses who experience CF usually distance themselves from others and withdraw and shield themselves from

emotional connection with patients and their families. The distancing behavior exhibited by nurses can be considered as a coping mechanism (Nolte et al., 2017).

De Boer et al. (2014) sought to examine the critical incidents among the ICU nurses to describe CF and the need for support. Four major themes that contributed to CF were identified in the study including high level of emotional involvement by nurses in patient-related incidents, poor patient care, avoidable incidents, and intimidation. The nurses in the study observed that after these events, they experienced physical, emotional, and cognitive/behavioral reactions.

Concerning physical reactions, the nurses commonly experienced symptoms such as sleeplessness, fatigue, and lack of energy. Nurses also experienced high emotional demands that cause them to feel hopeless in their ability to care for patients (Sheppard, 2015). The feeling of hopelessness heightened the intention of nurses to leave their job. Harris and Griffin (2015) incorporated the spiritual aspect of CF in their discussion and identified the key antecedents of CF among nurses to include length and degree of emotional investment, lack of personal and professional support, and lack of inner resiliency. About emotional investment, some nurses may stretch their ability to manage the demands of being empathetic and compassionate. This can significantly impact on their physical, emotional, and psychological wellbeing. Moreover, the inability of nurses to maintain personal and professional boundaries has been described to be a key cause of CF.

Additional studies have shown that the nurses who are at risk of suffering compassion fatigue are those who deliver high levels of care (Giarelli et al., 2016). This is a critical aspect of CF that should be contemplated because being aware of the risk of manifestation of CF can facilitate the adoption of strategies and activities that will help enhance the energy and improve the welfare of nurses (Wijdenes et al., 2019).

Personal triggers also influence the onset of CF within the nursing profession. Some of the common aspects that have been highlighted include increased self-expectation, personal crises, over-involvement in work, and personal commitments. In some cases, the personal limits of nurses, such as inexperience, overlooking severe symptoms exhibited by patients, and lack of energy contribute to CF among nurses. The recognition of these influences can aid in the development of effectual individual coping strategies for nurses (Al Barmawi et al., 2019).

Factors linked to the work environment play a significant role in enhancing CF among the various categories of nurses. Shortage of nurses and heavy workload are the critical factors associated with the work environment (Jarrar et al., 2018; Yu et al., 2016). Jarrar et al. (2018) also found the work setting added to invoking apprehension among nurses. When affected at work, the symptoms of CF observed in nurses permeate into their home life. Studies have shown that nurses with CF are faced with numerous personal and professional issues due to the stress at work. Accordingly, it is imperative for nurses to find a balance between personal and professional issues (Nolte et al., 2017).

CF impacts negatively on the emotional and physical health of nurses as well as their sense of job satisfaction. In addition, CF impacts healthcare organizations, as nurses are more pessimistic about the ability to experience positive change. As a result, the productivity of nurses and the quality of care they provide may diminish. Absenteeism has also been perceived to increase, with nurses demonstrating heightened intention to leave their jobs (Leitao et al., 2017). CF has the capacity to eliminate the practical attributes of nursing, including empathy and caring. These attributes are essential for the development of trusting relationships between nurses and patients. CF causes nurses to withdraw or distance themselves from patients and their families and to instead focus on the technical aspects of their jobs. The nurses become more pessimistic

about encouraging progressive change and may find it problematic to cultivate productive working relationships with patients (Harris & Griffin, 2015).

Compassion Fatigue in Trauma Nursing

CF is known to commonly occur in trauma, critical care, and emergency nursing departments. Trauma nurses are involved in providing care daily to critically injured patients. The majority of these patients are presented to the trauma center with life-threatening injuries that require urgent attention and may have poor outcomes. The prolonged exposure of nurses to this type of care increases their risk of experiencing CF (Hinderer et al., 2014). Trauma nurses have a high likelihood of developing CF due to the tragic conditions in which they provide care and the tragic outcomes that can occur during the process of providing care to patients. This form of work-related stress is inevitable for many nurses working in trauma centers. Due to the frequent exposure of trauma nurses to the highly stressful working conditions, they are at increased risk of suffering physical, emotional, and mental health problems (Zhang, Tai, et al., 2018).

Various studies have been conducted to examine the issue of CF in trauma nurses. Berg et al. (2016) conducted a qualitative study to measure CF in trauma nurses by allowing them to share their experiences and triggers of stress in their workplace. The study further examined the coping strategies employed by trauma nurses with CF. The outcomes of this study showed that more than half of the study participants were at risk of suffering CF due to the presence of various stressors. The key stressor was identified as trauma scenarios where patients were brought in with injuries from avoidable situations, with some patients dying during the process of care. The interaction of nurses with the family members of the patients was also a significant stressor because they would engage in negative conversations that had an effect on the emotions

of nurses. The ProQoL scale, demographic survey, and a focus group were used in this study.

Berg et al. (2016) found that CF was damaging to trauma nurses, and it had a negative impact on patient care.

Wentzel and Brysiewicz (2014) observed that working in a trauma center can, in some cases, be hectic and chaotic. The high influx of patients, overcrowding, inadequacy of resources, and high patient acuity increase the stress levels in nurses. There is a need for trauma nurses to be in a position to recognize and prioritize emergencies, conduct rapid assessments, facilitate the initiation of treatment, and engage in proper care delivery (Hunsaker et al., 2015). Trauma nurses are exposed to numerous traumatic events and frequently witness the suffering of patients increased their risk of suffering emotional and psychological problems. This ultimately leads to CF. According to Wentzel and Brysiewicz (2014), CF leads to increased rates of absenteeism and staff turnover in trauma centers. Besides, it lowers the quality of patient care, reduces patient satisfaction, decreases patient safety, and makes it difficult for trauma centers to recruit and retain staff. The common symptoms of CF among trauma nurses include depression, aggravation, lack of compassion and empathy to patients, detachment, irritation, and annoyance (Mooney et al., 2017).

Sacco et al. (2015) conducted a cross-sectional study in which they examined CS and CF in pediatric, adult, and neonatal intensive care unit nurses. The study reported that nurses are working at the bedside of patients who are critically ill witness much human suffering. The trauma nurses are often required to provide compassionate care to patients experiencing events and illnesses that are debilitating and life-threatening. Even though trauma nurses obtain their professional satisfaction from engaging in their work, the sustained exposure to the traumatic events puts them at an increased risk for CF. Moreover, as the work environment evolves, nurses

face an increased risk for CF. The findings from Sacco et al.'s (2015) study also supported the notion that younger and inexperienced nurses are at a higher risk for CF. It was concluded that trauma nurses should be provided with an environment in which they are supported through the diverse traumatic events, appreciated for their work, and made to feel that their input in providing compassionate care is valued.

Burnout (BO)

The term burnout is credited to Freudenberger (1974), who defined BO as the condition in which physical and mental energy is depleted as a result of the sustained exposure to various occupational stress factors (Lahana et al., 2017). BO is the emotional and behavioral impairment experienced by individuals due to the exposure to high levels of occupational stress. According to Maslach et al. (2001), BO is the chronic emotional exhaustion associated with interpersonal stressors in professional relationships. Nurses can exhibit emotional exhaustion during the performance of practice due to fractured relationships with their peers or management over a long period of time (Choi et al., 2018). BO encompasses three dimensions, emotional exhaustion, lack of personal accomplishment, and depersonalization. Of the three, emotional exhaustion is considered to be the main element used to describe BO (Ray et al., 2013).

People at risk of experiencing BO often exhibit some level of perfectionism, and they develop guilt if they do not perform to their expectation level. Even though BO can be severe, some studies have reported it to be a contagious syndrome (Petitta et al., 2017). Nurses can develop BO in the social context, particularly during their interaction with complaining staff. BO is a syndrome that has the potential to affect the infrastructure of organizations, resulting in decreased productivity as well as the deterioration of the quality of healthcare delivered to

patients. As a result, it can have significant negative impacts on the healthcare system in general (Dyrbye et al., 2017; Hunt et al., 2017; Poghosyan et al., 2010).

Dimensions of Burnout

BO is a multidimensional construct that comprises three parameters, including emotional exhaustion, lack of personal accomplishment, and depersonalization (Schaufeli et al., 2009). Emotional exhaustion is the key stress dimension of BO, and it refers to the feelings that individuals experience when their emotions are overextended. Emotional exhaustion occurs when nurses are subjected to high workload and personal conflicts at the workplace. Emotional exhaustion is vital to comprehending the functions of trauma nurses and the quality of care given to patients (Manzano-García & Ayala, 2017).

Depersonalization represents the interpersonal dimension of BO. It refers to the aspect of nurses expressing negative feelings and being detached when communicating with other individuals (Lahan et al., 2017). Depersonalization can be expressed in the form of unprofessional comments directed at colleagues at the workplace, blaming patients for the occurrence of medical problems, or the inability to show empathy to patients.

Another critical aspect of BO is the lack of personal accomplishment, which refers to the feeling of low professional achievement as well as productivity among the nurses. This dimension represents the self-evaluation aspect of BO. In most cases, trauma nurses who experience BO tend to evaluate their work negatively and develop a feeling of insufficiency in the manner in which they perform their jobs (Embriaco et al., 2007; Schaufeli et al., 2009). The understanding of the dimensions and efficiently identifying the risk factors for BO can help in the formulation of effective practices to limit the onset of burnout in trauma nurses.

Maslach Burnout Theory

The Maslach Burnout theory describes how burnout is measured using the Maslach Burnout Inventory (MBI). Maslach and Jackson (1981) are credited with developing the MBI which comprises of 22 items that connect to the three dimensions of BO; the first is the emotional exhaustion scale (9 items), which includes statements such as ‘I feel emotionally drained from my work’; the second is the depersonalization scale (5 items), which contains statements such as ‘I feel I treat some recipients as if they were impersonal objects;’ and lack of accomplishment scale (8 items), which contains statements such as ‘I have accomplished many worthwhile things in this job.’

The MBI was first designed to address burnout in the human services field. However, over time, it has been adapted to address a broader range of occupations, including general services, non-human services field, and education setting (Korunka et al., 2010). Based on the MBI, an amalgamation of elevated scores of emotional exhaustion and depersonalization and a low score on personal accomplishment forecast a high level of BO. The MBI is the most widely used instrument internationally, as it has been translated into several languages. The most contemporary form of the tool is the MBI-Educator’s Survey that has been acknowledged for its psychometric qualities and factor structure across the various teaching disciplines (Aboagye et al., 2018). The MBI has been shown to be a reliable tool that aids in measuring burnout among nurses using the Cronbach alpha values 0.90 for emotional exhaustion, 0.71 for depersonalization, and 0.79 for personal accomplishment (Poghosyan et al., 2009).

Cherniss Burnout Theory

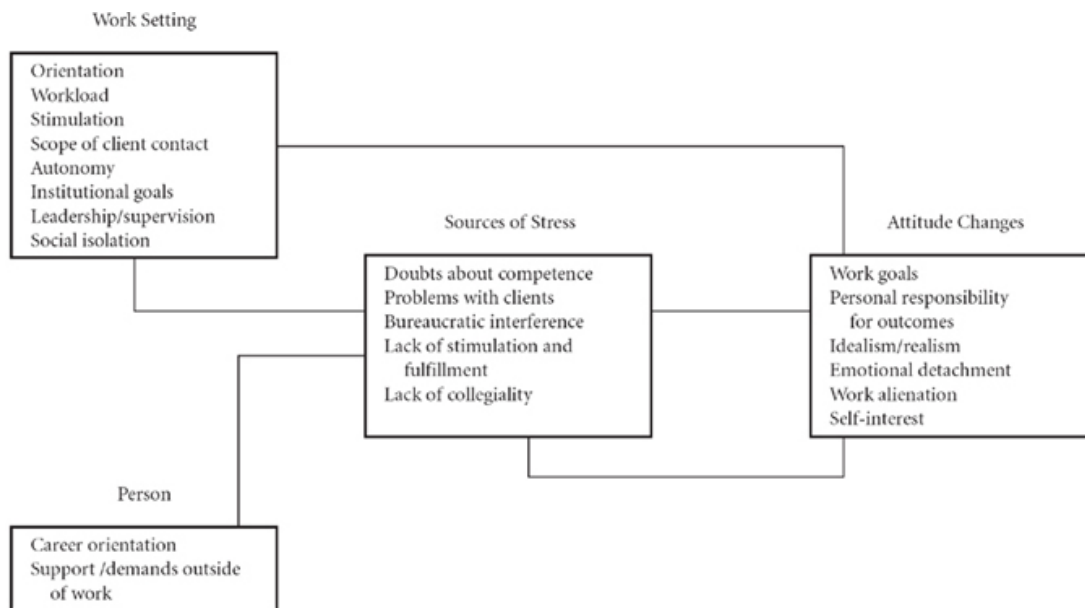
Another critical theory that focuses on burnout was developed in 1980 by Cherniss. The theory was following advanced research carried out among professionals in various fields,

including mental health, public health, nursing, poverty, teaching, and law (Leiter, 2017).

According to Cherniss, the different aspects of the work environment and individual characteristics can act as sources of strain, as shown in Figure 4.

Figure 4

Illustration of the Aspects of Cherniss Model of Burnout (Richardson & Burke, 1995)



These sources of strain can, for instance, create doubts in the mind of individuals about their competence and interfere with their ability to complete tasks as well as goal achievement. Cherniss offered a comprehensive model that regarded burnout as a process that develops over time. According to the model, burnout comprises negative attitude changes such as reduced personal responsibility for work outcomes, reduce work goals, increased emotional detachment from patients, less idealism, and alienation from work. The onset of the negative attitude changes is considered to be a form of coping, or it can also indicate inadequate coping through active problem-solving.

The Cherniss model presents three sets of variables that are suggested to affect burnout (Richardson & Burke, 1995). The first aspect is the work setting, which affects burnout directly

and consists of eight characteristics, as indicated in the figure above. The key aspects of the work setting include workload, leadership, stimulation, autonomy, orientation, social isolation, and supervision (Richardson & Burke, 1995). All these characteristics are believed to interact in order to produce the effect of burnout. The work setting can also affect burnout directly or indirectly through a second set of variables identified as sources of stress. The final aspect is the individual characteristics, which comprises elements such as career orientation, demographic characteristics, and extra work supports. The individual characteristics can also have a direct or indirect effect on burnout through the source of stress variable (Pines, 2017).

Burnout in the Nursing Profession

BO syndrome is a functional condition that occurs commonly among healthcare professionals. Nurses are at the frontline in providing patient care and thus report the highest rates of BO (Lahana et al., 2017). Burnout occurs when nurses spend long periods, expending too much energy in providing care to patients while having minimal time for recovery. Even though stress and depression can affect almost every aspect of the lives of individuals, symptoms of BO are known to occur only at work. There is adequate evidence to show that BO produces many adverse effects on the physical, emotional, and mental health of nurses (Lahana et al., 2017).

Within the healthcare sector, the prevalence of BO in the nursing profession has been found to range between 30-50% (Molavynejad et al., 2019). Various studies have also indicated that nurses are at an increased risk of developing BO compared to other healthcare professionals (Orsal et al., 2017). According to Lahana et al. (2017), numerous individual, institutional, and interpersonal stressors lead to the progression of burnout syndrome. Work experience, age, and personality traits like anxiety, emotional insecurity, low-stress thresholds, insufficient defense

mechanisms, and lack of self-control, are some of the fundamental singular stressors that may contribute considerably to the amplified probability of experiencing burnout (McMillan et al., 2016).

Further, the most common institutional stressors that increase the risks of BO include understaffing, work overload, unnecessary bureaucracy, ambiguity about the outcomes of delivered healthcare, experience with mortality, insufficient health and safety services, leadership style, ineffective administration, absence of work appreciation and little to no autonomy at work (Gomez-Urquiza et al., 2016; Lahana et al., 2017). Various other studies have reported that the less educated nurses, those with less experience, and those with no social support are more susceptible to BO. The development of burnout is also enhanced by organizational stressors such as unsupportive communication by the staff, lack of continuing education, inability to make independent decisions, and uncertainty about the care path to use for patients (Gomez-Urquiza et al., 2016; Hayes et al., 2015; Zou et al., 2016). Perceived disagreements with patients, relatives, or peers intensify the risk of BO. Emotional exhaustion is a direct outcome of disagreement that results in depersonalization and loss of a sense of personal accomplishment. Apparent disagreements and apparent fractured working relationships are considerable independent risk factors for severe BO. Preventing conflicts and improving communication in the workplace may, therefore, decrease the risk of BO (Embriaco et al., 2007).

Studies have reported differences in the levels of burnout experienced by nurses in different sectors. Differences were also reported in the dimensions of burnout among the nurses. In a systematic review conducted by Gomez-Urquiza et al. (2016) involving 27 studies about burnout among the oncology nurses, it was found that most of the nurses exhibited high levels of emotional exhaustion and reduced personal accomplishment. Moreover, in a study conducted by

Embriaco et al. (2007) examining burnout among ICU nurses, 30% of the critical care nurses suffered from severe burnout. In a comparative study involving many nursing staff from different units, including medical, surgical, psychiatric, and burns units in a hospital in Iran, it was found that nurses dealing with traumatic events showed higher levels of depersonalization and emotional exhaustion. The nurses in the psychiatric and burns units had higher levels of BO compared to the other nurses. This demonstrated that BO could be affected differently depending on the diverse clinical conditions (Szczygiel & Mikolajczak, 2018).

Concerning gender, studies have shown that female nurses are more vulnerable to burnout compared to their male counterparts. The role attributed to gender in the socialization process, where women are believed to get more emotionally involved with the problems of their patients, makes women more vulnerable to burnout (Galindo et al., 2012). Second, women have a higher probability of choosing professions that require them to interact and make direct contact with people. This increases the risk of suffering BO. Women are also subjected to double work standards, where they are required to take care of their homes while maintaining high professional performance. Other studies have also shown that women use denial and repression as underlying defense mechanisms; they deny or tend not to perceive their frustrations, negative feelings and exhaustion, always believing they can surpass their limitations in each of the multiple roles they perform (Geuens et al., 2017).

Based on the findings from the study conducted by Galindo et al. (2012), it was indicated that nurses who are satisfied with their jobs experience low incidences of BO. These nurses were found to have low levels of work stress. Satisfaction was associated with informational support, social support at work, learning opportunities, and progress in the ability to take part in decision-making. Moreover, symbolic elements that may contribute to satisfaction are related to the

ability to cope with routine stressful situations, and they slow down the process that leads to the onset of burnout. Capacities to manage intrinsic and extrinsic challenges deriving from occupational stress can help to mitigate the development of burnout in nurses (Chang & Chan, 2015).

Individual actions of nurses are effective in controlling burnout. Leadership also has a key role in preventing burnout by guiding and supporting the nursing staff, providing reasonable salaries, promoting the participation of nurses in decision-making, and improving organizational communication. Improved knowledge of burnout and its correlation with compassion fatigue and its impact on the intention of nurses to leave their jobs can aid in the planning of effective prevention strategies (Abedi-Gilavandi et al., 2019).

Outcomes

Health

The emotional exhaustion component of BO is more predictive of poor health outcomes compared to the other two outcomes. BO is known to have a negative impact on the mental and emotional wellbeing of nurses. Individuals with higher levels of burnout are more likely to report a range of psychological and physical health problems, including anxiety, depression, sleep disturbance, memory impairment, and neck pain (Bakker & Costa, 2014). In one of the studies, healthcare workers with high levels of burnout experienced a faster rate of deterioration in physical health. The burnout syndrome has also been found to be an independent risk factor for infections such as common cold and type 2 diabetes. Burnout has also been identified as a risk factor for cardiovascular diseases (Salvagioni et al., 2017).

With regard to mental health, BO has been associated with the personality dimension of neuroticism and the psychiatric profile of job-related neurasthenia (Salvagioni et al., 2017). Such

data might support the argument that burnout is itself a form of mental illness. However, the common assumption is that BO causes mental dysfunction. This means it precipitates the negative effects of poor mental health experienced by nurses, including depression, anxiety, and low self-esteem. A study by Killien (2004) to examine the effect of burnout on nurses showed that the difficulty of balancing work and family responsibilities had a negative impact on the mental health of nurses. As a result, the majority of the nurses suffered from depression, with others having suicidal thoughts (Alderson et al., 2015).

Individuals who are mentally healthy are able to cope effectively with the various stressors and thus have a reduced likelihood of experiencing burnout. Other studies have shown that individuals who were psychologically healthier in adolescence and early adulthood were more likely to enter and remain in such jobs, and they showed greater involvement and satisfaction with their work (Maslach et al., 2001).

Job Performance

There is sufficient evidence to show that burnout is negatively associated with job performance. In a meta-analytic study carried out by Swider and Zimmerman (2010), it was found that the three dimensions of burnout at the workplace had a significant correlation with absenteeism, poor job performance, and turnover. The primary explanation for the negative link between burnout and performance is that exhausted employees lack the concentration needed to perform well, and therefore make more mistakes. Additionally, the negative emotions that are characteristic of burnout impair the quality of decision making and decrease focus on new information.

Individuals who experience negative emotional states and who are psychologically detached from work also demonstrate reduced appropriate behaviors toward others and more

counterproductive work behaviors such as withholding information and taking longer unnecessary breaks. Nurses who experience burnout are less likely to provide assistance to their colleagues and are also less likely to receive help from others. This results in reduced productivity in healthcare organizations (Bakker et al., 2014).

Burnout can result in elevated turnover rates among nurses. This means the remaining nurses are expected to work even more hours and even overtime in order to address the issue (Han et al., 2015). When nurses are forced to work with a higher patient ratio, there is an increased likelihood of committing medical errors, providing delayed care, reduced quality of care, and increased rates of transferring infections to the patient (Galletta et al., 2016). All these contribute to lowering the performance of nurses in their jobs.

COVID-19 and Its Effects on Nurses

COVID-19 is a recent infectious disease that affects human respiratory system. The problem of COVID-19 is its rapid spread, which affects many people simultaneously and puts considerable pressure on nurses especially in emergency departments. Kim and Choi (2016) studied the Middle East respiratory syndrome coronavirus (MERS-CoV), a variety of coronavirus, which occurred in 2015. MERS-CoV was not as serious as COVID-19, which caused a global pandemic as of May 2020, but it still affected nursing turnover considerably. Kim and Choi (2016) pointed to job stress, poor hospital resources for treatment, and poor support from the family and friends as the major causes of nursing burnout and as a result turnover. Thus, working under pressure and in stressful situations, nurses experience burnout.

Chen et al. (2018) conducted a research study devoted to turnover in a Chinese healthcare facility before the epidemic occurred. The major causes of nursing turnover were involvement in hospital affairs, resource adequacy, age, professional title, work duration, employment type, and

education level. This is the analysis of the situation in the common situation. However, the causes have considerably changed when outbreaks of COVID-19 took place. COVID-19 is a virus, which affects not only the professional environment but also the whole community. Thus, it is important to pay attention that in the case of COVID-19, nurses feel pressure not only from the professional side, but also from the society as a whole.

Borges et al. (2019) have found the relationship between compassion fatigue and high levels of burnout and stress. The findings of the study have shown that 51% of nurses working in emergency and urgent care unit had a high level of compassion satisfaction, and at the same time 54% depicted a high level of burnout, and 59% showed a high level of stress. O'Callaghan et al. (2020) has also indicated that high level of compassion satisfaction and compassion fatigue were the issues of exhaustion. Peters (2020) has enumerated the following aspects which may help preserve nurses at work during pandemic, physical health and wellbeing, willingness to work, psychological health and wellbeing, and workforce planning and support. Each of these aspects is of high importance to prevent nursing leaving their job places.

Analyzing the situation in nursing homes, Barnett and Grabowski (2020) have indicated that the major reasons of the high level of nursing turnover, especially in the period of pandemic, are low salaries and a demanding work environment. Nursing is a complicated job, which requires from staff considerable and constant inclusion, especially in the period of epidemics. However, in cases nurses do not get proper financial support they are not interested in working. COVID-19 is a deadly infectious disease, and contacting with the disease every day nurses should understand what they do it for (Nemati et al., 2020). Moreover, it is essential to ensure that nurses are properly protected and can take care of patients rather than watch their health deteriorate and increase the mortality rate. Lack of resources and high level of involvement in

care are the factors which may cause burnout. That is why low salaries and a demanding work environment are the major causes of nursing turnover.

The problem of COVID-19 will not end with the disease rates reduction. Catton (2020) has stated that the future decade will be complicated by the number of environmental challenges and the current pressure on nurses will affect them in a considerable manner. Shaw (2020) contended it is imperative in times such as these that organizations promote a culture of trust and understanding. It is also fundamental that workplaces encourage resilience in trainees, especially when the present communal atmosphere may encumber the expansion of resilient characteristics.

Compassion Fatigue and Burnout Implication on Turnover Intention

Studies indicate a correlation between compassion fatigue and burnout, which also results in turnover intention among registered nurses. Mudallal, Othman, et al. (2017), using a sample of 407 registered nurses from 11 hospitals in Jordan determined that compassion fatigue and burnout contributed to the loss of morale, low job satisfaction, low productivity, and increased feelings of powerlessness among nurses. Nurses working in trauma centers are exposed to traumatic experiences, such as loss and having to watch clients go through excruciating pain (Scanlan & Still, 2019). A significant number of nurses will sympathize with patients instead of empathizing, putting them at a higher risk for compassion fatigue. Job dissatisfaction is attributed to the loss of interest, inability to process emotions, and the emotional and physical exhaustion among the registered nurses suffering from compassion fatigue and burnout (Van der Heijden et al., 2019).

Burnout, which is characterized by the emotional and physical exhaustion and inability to cope with traumatic experiences, culminates into the decreased quality of life, organization commitment, and increased retention intention among the nurses (van Mol et al., 2015). The

inability to process emotions puts registered nurses at risk of mental health illnesses, including depression, acute stress, and generalized anxiety disorders. Thus, many nurses might experience insomnia, lack of appetite, loss of interest, and have mood disorders that affect their quality of life (Van der Heijden et al., 2019). The affected nurses have decreased job satisfaction, which has a direct impact on motivation, productivity, and quality. Absenteeism and retention rates are high, which causes significant losses for healthcare organizations.

A major challenge in most organizations is staff retention, particularly for the most experienced and competent registered nurses. Staff retention is vital because it enhances the transfer of knowledge in an organization (Van der Heijden et al., 2019). Thus, experiences, skills, and ideas are transferred to new staff, which plays an essential role in promoting healthcare in an organization. Compassion fatigue and burnout have been identified as primary impediments for employee retention and knowledge transfer in healthcare organizations. The unfavorable working environment, especially the one that exposes employees to emotional and physical exhaustion, is to blame for the lack of organizational commitment.

Contrary to the common belief that high salaries are the primary sources of motivation for employees, a significant number of registered nurses desire better working conditions, which is characterized by increased social interactions, teamwork, and effective leadership (Cocker & Joss, 2016). Staff turnover has occurred even in organizations where they get paid high salaries. The rationale is the difference between employee motivation and job satisfaction. An employee can become motivated by good remunerations and fringe benefits but still lack job satisfaction, mainly because of ineffective leadership, lack of employee autonomy, and the presence of emotionally draining work-related factors, among other conditions.

Van der Heijden et al. (2019) established factors such as recognition and rewards system and supervisory reports to be vital in fostering registered nurses' retention. The supervisory reports demonstrate the concern for nurse welfare, especially when such reports reflect the authentic experiences registered nurses face in the trauma centers. Nurses feel that the management cares about their plight and that they are committed to improving working conditions. The study demonstrated that with high levels of support from the supervisors, nurses show fewer signs of burnout and can overcome the harmful effects of compassion fatigue.

Supervisors offer social support that protects employees from succumbing to psychopathological disorders. The rationale is that registered nurses have a safe environment where they can express their emotions rather than bottling up (Van der Heijden et al., 2019). The feeling of attachment and belonging to the organizations help in minimizing turnover intentions. When employees feel that they are appreciated and that the organization cares, validates, and is prepared to offer emotional support, they are encouraged and remain committed to work ethics. An excellent relationship between employees and the management also allows employees to express their dissatisfaction or grievances. That allows them to, for instance, demand better working conditions that would lead to improved productivity and quality of services. Absenteeism rates decrease, and employees maintain their level of productivity.

Compassion fatigue and the lack of morale has also been attributed to overwork. Many trauma centers, even in developed nations, have inadequate staff (Rose, 2016). Nurses working in such centers are forced to work for longer hours, where they suffer from compassion fatigue as a result of the severe nature of the cases they handle. Working for long hours impedes the work-life balance. A significant number of registered nurses have limited time with family and friends, which increases risks for burnout and low job satisfaction. Enhancing work-life balance

has been found to improve employee job satisfaction, loyalty, and retention (Nantsupawat et al., 2016).

Proposed Solutions

There is a relationship between effective rewards and recognition programs and job satisfaction (Mudallal, Othman, et al., 2017). Employee recognition and rewards might include offering free training to enhance employee development, promotions, and paid leave. Employees that work in trauma-prone areas need to feel that the organization recognizes their contribution. Offering training equips an employee with the skills needed to work effectively. In some organizations, the staffs have access to free counseling services and subsidized gym services. The employees feel appreciated and are more likely to be committed to the organization minimizing turnover intention.

Compassion fatigue and burnout can result in significant losses for healthcare institutions. To prevent the losses and foster staff retention, leader empowering behaviors that include employee autonomy, promotion of meaningfulness of work, and enhancing the capability of employees to participate in decision-making is necessary (Mudallal, Othman, et al., 2017). Registered nurses should be an integral part of the decision-making in the team in the trauma centers. As individuals who are most affected and who often come into contact with the patients, they require recognition, and their contribution to the decision-making process cannot be underrated (Wijdenes et al., 2019). Registered nurse autonomy is also necessary to enable them to work in an environment that is less restrictive. The goal should be to avoid bureaucratic management techniques that deny the registered nurses an opportunity to display their creativity and innovation in overcoming significant challenges in their work. Enhancing the meaningfulness of work also helps to minimize the adverse effects of burnout on job satisfaction.

Employees need to identify with what they do and derive meaning from it. Leaders need to link employees' contributions with purpose and appreciate their continuations, which is one way of giving meaning to employees' work. Leaders also need to empower employees by enhancing their skills and knowledge to become more effective in their work.

Compassion Fatigue and Burnout Effects on Patient Care Quality

Patient care quality is a vital aspect of healthcare because it leads to improved patient satisfaction. The continuous improvements and the ability of an organization to offer quality care demonstrates the adherence to patient safety policies. In an ideal situation, healthcare organizations will report less or no issues related to low patient care quality. Factors such as compassion fatigue and burnout negatively affect quality in the trauma centers. There is a strong correlation between compassion fatigue and burnout in patient care quality. Registered nurses continue to witness incremental amounts of work in the trauma center. The ratio of the nurse-to-patient is disproportional, leading to physical and emotional fatigue. Patient care quality is dependent on the emotional and physical status of the nurse (Ross, 2016). A significant number of nurses that suffer from burnout will also experience loss of interest in their work, low job satisfaction, and decreased productivity. These factors have a negative implication on patient care quality.

In trauma centers, the unfavorable working conditions, and constant exposure to patients' pain and losses, predispose registered nurses to excruciating psychological distress. Many registered nurses lack better coping mechanisms meaning that they respond adversely to emotional distress leading to compassion fatigue and burnout. Medical errors are likely to arise where registered nurses are experiencing burnout. Statistics demonstrate that medical errors, which are sometimes associated with the mental status of the nurses, is one of the major causes

of deaths among patients (Cetrano et al., 2017). The rationale is that compassion fatigue and burnout might lead to loss of concentration, insomnia, and loss of interest, which are vital in ensuring that the nurse is alert and prepared to execute their work at all times.

Salyers et al. (2017) conducted a meta-analysis study to determine if the relationship between burnout and patient care quality were statistically significant findings indicated that burnout had a negative impact on patient care quality and increase risks for medical errors. Nurses who suffered from fatigue had a negative perception of safety. The nurses did not focus attention on safety procedures, which exposed patients to more suffering. Again, the situation could be explained by the nurses' state of mental health. Poor services to patients is a significant challenge for healthcare organization because of decreased patient satisfaction. A healthcare organization that fails to adhere to the high standards of healthcare will have a reduction in its customer base, culminating in major financial losses. Cases of negligence also soar meaning, and healthcare organizations will still incur more losses because of litigations.

Maladaptive coping mechanisms increase risks for poor services. Several nurses that have succumbed to compassion fatigue and burnout cope through drinking and using substances that affect their judgment (Ross, 2016). Some will use antidepressant drugs without prescription, which further alters their mood, and affects their ability to make informed decisions. Continuous stressful conditions lead professionals to alcohol abuse, used as a tranquillizer, relaxant, anxiolytic and even as an escape mechanism (Fernandes et al., 2018).

Registered nurses, like other employees, require a favorable working conditions for them to remain productive and provide quality care. Some studies link the patient care quality, not mostly on the nurses' inability to cope with burnout, but because of inadequate essential resources. With many trauma centers serving an increasing number of patients, hospital

administrations fail to add more staff. Apart from that, studies have found that many registered nurses work in organizations with inadequate technology and with less adherence to evidence-based practice. Nurses, who also work for long hours, are expected to work in such unbearable conditions and deliver quality services. Many nurses suffer from burnout because of the working environment, and not the conditions of the patients (Hall et al., 2016). This leads to loss of morale and job satisfaction, which eventually culminate into poor services and quality concerns.

While there is a relationship between burnout and patient care quality, some studies also demonstrate that the outcomes (healthcare) are linked to leadership in the trauma centers (Hall et al., 2016). Effective leadership that is characterized by emotional intelligence, teamwork, and effective communication will lead to low levels of burnout, and less patient care quality issues. Emotional intelligence ensures that leaders develop empathy and can understand and respond to the emotional pain affecting nurses (Hinderer et al., 2015). Such leaders might respond by providing an environment that encourages social connection and support. Teamwork is vital in overcoming the challenges of working in trauma centers. As employees share experiences among themselves and with their leaders, the negative effects of compassion fatigue and burnout become on quality is addressed. Leaders are also crucial in monitoring the situation in the workplace, ensuring that nurses are not exposed to intense pressure, and enhancing the adherence to safety policies. Thus, other extraneous factors, such as leadership, will determine the effects of burnout and quality in healthcare organizations.

With the realization that compassion fatigue and burnout lead to low patient care quality, organizations need to take precautions to minimize medical errors and ensure that registered nurses remain productive. Apart from enhancing adequate staffing, trauma centers must develop space where stress-reducing practices can be used. Stress is a common occurrence; thus, the

organization needs to create space and time for affected employees to listen to music, take a walk, meditate, go to the gym, or engage in any activity that would result in their mental wellbeing (Nolte et al., 2017). In some organizations, employees have access to professional counseling, which is very imperative in ensuring in offering psychological treatment. Initiating the debriefing sessions is necessary, especially for employees that are new in the job. In the trauma centers, employees will encounter situations or events that would leave them traumatized and suffering from emotional distress. Providing an opportunity for employees to ventilate minimizes risks for psychopathological disorders.

Studies have determined nurses' absence of mindfulness about compassion fatigue, and burnout is to blame for the deterioration of their mental health and the low patient care quality (Nolte et al., 2017). Most employees do not understand what the loss of interest in their work means. Even when they experience insomnia, decreased appetite, and mood disorders, some nurses will think that it is reasonable and might not seek help until it is too late. Effective leadership is needed to monitor employees' progress and to respond to any signs of distress (Van Mol et al., 2015). Supervisors need to establish a good relationship with their employees so that they are free to share their distress and begin therapy as soon as possible. Training on mental health is essential because it helps nurses become aware of compassion fatigue and burnout, and be able to link them to quality services.

Summary of Literature Review

As outlined in this literature review, CF and BO occur mostly among trauma nurses and are responsible for the increased turnover rates among these nurses. Nurses who work in the trauma centers and those who deal with critically ill patients have a high likelihood of suffering CF and BO. This can be attributed to their increased exposure to patient trauma, the stressful

working conditions, and the lack of proper resources to cope. The stressful experiences and working conditions cause emotional exhaustion which leads to CF, and may subsequently lead to chronic burnout. CF was reported to occur due to exposure to the suffering experienced by patients, especially those exposed to traumatic events. CF results in the development of long-term consequences that are highly irreversible. The critical tool for measuring CF is ProQoL. BO, on the other hand, is the emotional and behavioral impairment experienced by individuals due to the exposure to high levels of occupational stress. BO encompasses three components, emotional exhaustion, lack of personal accomplishment, and depersonalization.

BO affects the mental and emotional wellbeing of nurses and is responsible for increased rates of turnover. The key tool for measuring burnout is the MBI. Both CF and BO are key contributing factors for increased turnover and shortage in the nursing profession. Turnover interrupts the smooth operation of healthcare services and bears a significant financial burden on organizations. This literature review is intended to enhance the understanding of the correlation between CF and BO to turnover intention among nurses. This understanding will aid in the development of strategies to curb the issue of CF and BO and, in the process, reduce turnover in trauma center nurses, which negatively affects organizational costs.

Summary of Section 1 and Transition

This section presented the foundational basis for this study by outlining the background of the problem, the problem statement, purpose statement, nature of the study, research questions, hypotheses, theoretical framework, definition of terms, assumptions, limitations, delimitations, reduction of gaps, implications for biblical integration, relationship to field of study and a review of professional and academic literature. This section established the groundwork essential to progress with the methods that will examine the relationships between

compassion fatigue and burnout to turnover intention in nurses employed by trauma centers. The next section, Section 2 will present aspects related to the application of the research methods and design. This section includes material about the population and sampling, data collection, data analysis, and reliability and validity.

Section 2: The Project

This chapter describes the design and methodology that were used in this study to examine the relationship between compassion fatigue, burnout and turnover intention for trauma center nurses in the state of Alabama. The researcher designed this study to expand on the current literature related to compassion fatigue, burnout and turnover intention in healthcare. It includes a description of the research setting and the participants that contributed to the study. The instrumentation and the data collection procedures are clarified in detail. The chapter concludes with an explanation of the data analysis techniques that were followed to determine and examine the relationship between compassion fatigue, burnout and turnover intention for trauma center nurses in the state of Alabama. The sections are organized as follows: (1) purpose statement, (2) role of the researcher and participants, (3) research method and design, (4) population and sampling, (5) data collection, (6) data analysis technique, and (7) reliability and validity.

Purpose Statement

The purpose of this quantitative, correlational study is to evaluate the relationship between compassion fatigue, burnout and turnover intention for trauma center nurses. The independent variables include compassion fatigue and burnout. The dependent variable is nurse turnover intention. In research on compassion fatigue and burnout in trauma nurses, researchers call for future exploration directed toward examining the factors that lead to compassion fatigue (Nolte et al., 2017) and burnout (Manzano-García & Ayala, 2017).

This study aimed to fill that gap in research literature. This larger problem was explored through an in-depth study of the specific factors that influence the development of compassion fatigue and nursing burnout and the correlation to turnover intention in trauma centers in the

state of Alabama. Previous studies have shown that certain factors such as the level of education, nursing status, training, and manager support could influence the level of compassion satisfaction, compassion fatigue, and burnout in various nursing environments (Hunsaker et al., 2015; Zhang, Tai, et al., 2018).

Prior literature has examined compassion fatigue and burnout of nurses in various specialties in multiple settings. These specialties include oncology, pediatrics, and emergency care (Berger et al., 2015; Kelly et al., 2015; Meyer et al., 2015; Sung et al., 2012; Wu et al., 2016). However, although a significant amount of research has been conducted related to compassion fatigue and burnout in other disciplines and professions, the relationship between compassion fatigue and burnout and turnover intention of nurses in trauma centers has not been examined in the United States.

According to Zhang, Tai, et al. (2018) there will be a nursing shortage of 154,018 RNs by 2020 and 510,394 RNs by 2030. Prolonged nursing vacancies can result in negative effects on local, regional, and national levels. One study reported hospitals with insufficient staffing are positively correlated with higher readmission rates and increased healthcare costs (McHugh et al., 2013). Nurse turnover and retention influence healthcare workforce development and delivery of clinical care (Kurnat-Thoma et al., 2017). As leaders examine causes of compassion fatigue and burnout, evidence that these factors affect retention may be present. This evidence can be used to retain nurses, reduce organizational costs, and positively influence patient care.

Role of the Researcher

The role of the researcher involved various duties, such as actions devising the underpinning for this research; precisely, survey compilation, administration and data analysis. Furthermore, the researcher recruited participants from the study population by employing the

snowball sampling method. After approval from Liberty University's Institutional Review Board (IRB), the researcher distributed reproductions of the survey and questionnaire via a third-party, online survey platform and gathered responses from the designated online repository upon completion. The researcher collected data required to perform the quantitative analysis of the information regarding relationships between compassion fatigue and burnout to turnover intention in trauma center nurses in the state of Alabama. This process encompassed the choice of survey instruments and procuring authorization for use from the designers of aforementioned instruments. Also, the researcher was responsible for closing the online survey when the required 382 responses were received and collected the data from the Qualtrics online survey platform. Lastly, the researcher analyzed and compared the survey results to the hypotheses. Overall, the researcher of this study was responsible for the entire process.

Participants

The objective of the research was to have assurance in the participants' survey replies. Any prospective candidates had to meet several criteria before they will be considered for participation in this study. Potential survey respondents had to be a registered nurse working in a trauma center in Alabama, who was at least 18 years of age, and had at least 1 year of experience. The participants had to possess requisite knowledge and experience in the discipline being studied (Fulton, 2018). Each survey contributor was required to review and agree to a consent-to-participate form and was permitted to opt out at any time during the study.

The researcher accessed the participant pool following authorization from the Liberty University IRB. Initial potential contributors were sought through a search on Facebook, LinkedIn, and Google. Many professionals, particularly registered nurses, post individual endorsements on social media in which they specify their years of experience, professional

certifications, and email address. A professional relationship was initiated with some participants via a request email and a link to the online surveys was provided. Other contributors were recruited by utilizing purposeful snowball sampling. The investigator provided the selected participants the required material about the study and they were asked to forward it to their associates who met criteria to take the survey.

To guarantee proper moral and ethical security of contributors, all data were gathered anonymously from a substantial collection of organizations so that no person, system, or organization, or can be linked to this study. The researcher used Qualtrics, a third-party survey host, to organize the email distributions using email lists procured by the investigator. The data will be preserved and safeguarded for the customary three-year record preservation period after which the information will be deleted and overwritten. The researcher intentionally selected participants with diverse demographic backgrounds, years of experience, levels of education, and area of specialty to guarantee an assortment of backgrounds and members from vulnerable populations were not included in the research.

Research Method and Design

Discussion of Method

This research employed a quantitative, correlational study of nurses employed by trauma centers to examine the relationship of compassion fatigue and burnout to turnover intention. The quantitative research method involves utilization of statistical, arithmetic, computational mechanisms to generate outcomes. It is conclusive in its purpose as it aims to measure the problem and understand how prevalent it is by observing for anticipated outcomes to a specified group (Zyphur & Pierides, 2019). A quantitative method was used because the objective of this study was to determine the connection between variables measured statistically (Watson, 2015).

This study gleaned quantitative data from a survey for analysis. The quantitative method used in this study permitted comprehension of the correlation among the variables of compassion fatigue, burnout, and turnover intention. Additionally, the objective was to survey a sample that personifies a larger population. The population for this study was trauma center nurses working in the state of Alabama. A quantitative design allows the findings to be generalized so that more robust future research can then be accomplished (Creswell & Poth, 2018).

A qualitative method was not chosen because qualitative data lack the ability determine the connection among variables (Creswell & Poth, 2018). Qualitative researchers aspire to use social phenomenology to focus on the compilation of unique singular experiences (Chapman et al., 2015). Qualitative research utilizes words instead of statistics and numbers and applies a naturalistic investigation to appreciate social factors, philosophies, and motivating details that affect occupational functions under natural conditions (Ruel, 2017). Examples of qualitative research are grounded theory, narrative, phenomenology, case study, and ethnography.

Mixed methods research includes amassing both qualitative and quantitative information and combining the two (Creswell, 2014). The quantitative data contains closed-ended information that is statistically measured and creates a mathematical validation. Inversely, qualitative data, are more subjective and flexible. The data chronicles the authentic voice of the contributors to be comprehended and gives elucidation of witnessed reflections. Mixed method strategies can counterbalance these deficiencies by permitting for both investigation and examination in one research study (Schoonenboom & Creamer, 2018). Halcomb and Hickman (2015) asserted that the mix methods design cultivates the expansion of practical concepts that cannot be completely comprehended when a researcher employs only quantitative or qualitative approaches. A mixed-methods analysis of two individual data sources will not strengthen the

study or generate data for the connection between desired variables. The concentration on the relationship, not the effects of the variables, is the purpose the quantitative, correlational design is the most appropriate for this study.

Discussion of Design

The suitable quantitative research design for this research endeavor was the correlational design. No true or pseudo experimentation took place on any research contributors. Participants in this quantitative research study were not members of any control groups, did not receive any treatment and treatment was not withheld. The correlational design was chosen because the selected registered nurses surveyed in this study were not designated randomly to receive any treatment. Obtained data were collected willingly which eliminated the ability to generate decisive causal suppositions. The survey method was employed to detect conclusions as it was the most useful process for data collection and statistical analysis (Hiebl & Richter, 2018). Consequently, the selected research design, correlational, provided the applicable means to uncover the extent to which compassion fatigue and burnout relates to turnover intention in trauma center nurses. Creswell (2014) contended that the quantitative research method establishes to be very applicable when examining relationships that involve variables, predictions, and statistical tests.

Descriptive research pursues to describe the current state of a particular variable, which is also incongruous for this study (Creswell & Poth, 2018). The correlational design is a classification of non-experimental research where two variables are measured, and the statistical relationship is studied. This research was non-experimental because no intermediation were presented to the population, and no variables were manipulated (Creswell & Poth, 2018). Causal-comparative/quasi-experimental seeks to produce cause-effect relationships among variables.

The focus on the relationship, not the effects of the variables, was the reason the correlational design was deemed the most appropriate selection for this study.

Population and Sampling

Under optimal conditions, it would be beneficial to measure an entire population of interest. However, this is generally not feasible for most research. Therefore researchers obtain a sample of data from the whole community of interest and analyze the sample to generalize results to the broader population. The subsequent sections will discuss the population size, sampling method, sampling size, sampling frame, participant eligibility criteria, and relevance of characteristics for the designated sample.

Discussion of Population

The study population included registered nurses working full time in a trauma center in Alabama, who were at least 18 years of age and had at least one year of experience. It was imperative that nurses who participated in this study be regularly delivering care and interacting with patients regularly. This guaranteed that the study contributors were exposed to the stress of caring for patients and interacting with their families in the acute care environment. According to the Alabama Board of Nursing, the state has a population of 87,238 registered nurses as of May 2020. The American Hospital Directory reports that Alabama has 126 hospitals. Out of 126 hospitals, 54 (42.9%) are designated as trauma centers, including level I, II, and III classifications (Alabama Public Health, 2020). This is the geographic population that was surveyed for the purpose of this study.

Discussion of Sample

In prior studies, small sample sizes with low response rates were limitations as 142 valid responses from nurses employed by tertiary hospitals with 500 beds or more in two cities among

eight hospitals in Korea and 284 responses were received from emergency department nurses who worked throughout the United States (Hunsaker et al., 2015; Sung et al., 2012). Other researchers suggested future studies be conducted with larger sample sizes to increase generalizability, external, and statistical conclusion legitimacy (Adams et al., 2019).

It was vital to select the appropriate population to sample from. It was equally as imperative to choose a suitable sample size for analysis. In quantitative studies, the aim is to select a sample of appropriate size to decrease the likelihood of type I and type II errors, while concomitantly preventing selection of a population that is too sizable, jeopardizes the practicality of the research. When selecting a sample, an effort was made to recruit members from diverse healthcare systems to increase the representation of the total population for this study. The researcher used the Qualtrics online platform to combine selected survey instruments, allowing participants to reply to the e-mail survey with anonymity. According to Sterzing et al. (2018), participants are honest when completing anonymous surveys.

The calculation based on the targeted population used both confidence interval and confidence level to give an adequate sample size for this study. Based on the information obtained from human resources and nursing administration, an estimated population of more than 10,000 nurses employed by Alabama trauma centers exists. Using a 95% level of confidence, the researcher believes that the results of the research will be precise at a +/-5% point interval (Creswell, 2014). To achieve a 95% level of confidence for the selected population, sample size calculator from Creative Research Systems recommends a minimum of 370 respondents need to complete the survey. Since this research studied a specialized group in which the precise population number was unknown, the researcher selected a larger minimum sample size of 382 which is recommended for a population of up to 87,238 (total number of

nurses in Alabama) was used to guarantee adequate power to prevent Type II error using correlation and regression statistics.

The investigator assumed that the sample population embodies the general population utilizing the snowball selection technique. The snowball sampling method was selected for its simplicity in accessing a more extensive, more varied sample of the target population. This was to ensure the generalizability of this study's conclusions (Byshkin et al., 2016). The snowball technique permits richer dispersion into a population when all members are not known to the investigator, as in the circumstance of extracting e-mail lists from public directories. Like other non-probability sampling methods, there is still an opportunity for conceivable sampling bias (Sahashi & Morita, 2015).

To amplify the probability of accessing a large, diverse sample, the investigator took numerous measures. The Alabama State Nurses Association (ASNA) is a professional organization devoted to registered nurses in the state of Alabama. Per ASNA (2020), there are over 3,000 members throughout the state. Following IRB approval, preliminary contributors were solicited from a social media post on the Alabama State Nurses Association (ASNA)'s Facebook page with permission. The ASNA website states that its Facebook page is open and individuals are free to place items such as a survey link for academic research, on the platform without their endorsement after IRB approval. Participants were also recruited via posts on the researcher's personal timeline/news feed on Facebook and LinkedIn. This granted access to a significant number of prospective candidates. Many professionals, such as registered nurses, post individual credentials on social media in which they specify their years of experience, professional certifications, and e-mail address.

Participants were also recruited via Facebook, LinkedIn, e-mail, and personal

communication with trauma center nurses in Alabama. A professional relationship was commenced with participants via a request e-mail, and a link to the online surveys was provided. The investigator then provided the identified prospective contributors with the necessary information about the study and were asked to forward it to their associates who met the criteria to take the survey. The sample was drawn from the accessible population of nurses employed by any of the 54 identified trauma centers in the state of Alabama.

Data Collection Plan

The task of data collection required various actions to be performed by the investigator. The researcher meticulously and ethically recruited survey candidates, obtained access and initiated professional relationships with them, cultivated a purposeful sampling size, acquired information, and stored data securely (Creswell & Poth, 2018). Furthermore, the researcher gathered quantitative data from a survey for analysis. The quantitative method used in this study allowed an understanding of the correlation among the variables of compassion fatigue, burnout, and turnover intention. Additionally, the objective was to survey a sample that represented a larger population (Creswell & Poth, 2018). Accordingly, the researcher functioned as a fundamental orchestrator in the collection, consolidation, and final analysis of the data.

The researcher collected data utilizing the snowball sampling technique to recruit contributors from the study population. The researcher selected this method for its straightforwardness in reaching a wider, more heterogenous sample of the study population to aid in increasing the generalizability of this study's conclusions (von der Fehr et al., 2018). Moreover, these respondents had to be at least 18 years of age and work in an Alabama trauma center. A third party vendor Qualtrics, an online data collection service was used in concert with recruitment from a social media post on the Alabama State Nurses Association's (ASNA)

Facebook page with permission.

The aforementioned three existing survey instruments certified and validated professionally, in parallel with demographic questions were the principal foundation of the data acquisition. All participants answered eligibility verification and demographic questions. Personally recruited participants received an email containing the informed consent information and link to the survey. The investigator then provided the identified prospective contributors with the necessary information about the study and they were asked to forward it to their associates who met the criteria to take the survey

Qualtrics, an online-based survey platform, utilizes a secure SSL encryption of survey hyperlinks and related data spreadsheets. The investigator was responsible for locating the email addresses for recruitment of preliminary participants from open source information databases. The researcher used the Qualtrics online platform to combine selected survey instruments, allowing participants to reply to the electronic survey with anonymity. A follow-up email was sent to participants where the email address was obtainable through data mining from public sources such as Google and hospital data bases. The reminder email was sent to acquired emails at the third week. Potential participants who were recruited through conversation received follow-up emails at the same frequency and times as they are sent for the participants recruited through email. Data were collected anonymously, and the investigator did not endeavor to disclose any participant's or organization's identity. The prime danger to contributors and their organizations was a confidentiality breach. The data collection method was confidential and without reference of any organization or group of organizations.

Instruments

The quantitative research method generates results by use of computational,

mathematical, and statistical tools. It is decisive in its determination to measure the issue and comprehend how predominant it is by observing for trends to make generalizations to a greater specified population (Zyphur & Pierides, 2019). The investigator utilized a quantitative survey questionnaire as the mode for the collection of data. Data were amassed using an online survey hosted by Qualtrics. The survey included informed consent confidentiality and the ability to opt-out information. If candidates agreed to the terms of participation, they were asked to proceed and begin the survey. The researcher used three instruments to determine the relationships of CF and burnout factors: Maslach Burnout Inventory (MBI) Questionnaire, Professional Quality of Life Scale (ProQOL), and Anticipated Turnover Scale (ATS). These instruments were selected due to professionally endorsed reliability and validity, practical completion time for participants, and capacity to assess the variables necessary for this research.

The Maslach Burnout Inventory (MBI) is the most commonly utilized instrument for assessing burnout (Poghosyan et al., 2009). The Maslach Burnout theory describes how burnout is measured using the Maslach Burnout Inventory (MBI). Maslach and Jackson (1981) are credited with creating the MBI which contains 22 items that are linked to the three dimensions of BO; the first is the emotional exhaustion scale (9 items), which includes statements such as ‘I feel emotionally drained from my work;’ the second is the depersonalization scale (5 items), which contains statements such as ‘I feel I treat some recipients as if they were impersonal objects;’ and lack of accomplishment scale (8 items), which contains statements such as ‘I have accomplished many worthwhile things in this job.’

The researcher also used the Professional Quality of Life Scale (ProQOL) which is the most frequently used measure of the negative and positive effects of assisting others who experience suffering and trauma (Heritage et al., 2018). The ProQol instrument was utilized to

determine the relationships of compassion fatigue factors within the 30 item, three factor instrument. The purpose of this research method was to examine relationships relating to employee burnout and compassion fatigue in nurses employed by trauma centers.

The Anticipated Turnover Scale (ATS) was used to measure the nurse's intent to leave the organization. The Anticipated Turnover Scale (ATS) is a 12-item, Likert-type scale with a range of responses from 1 (strongly disagree) to 7 (strongly agree). The calculated score ranges from 1 to 7; a higher score indicates a higher intent to leave (Adams et al., 2019). The aim was to use at multiple organizations and target trauma center nurses in the state of Alabama to complete surveys. The consolidated assessment consisted of a combination of all of the aforementioned survey instruments in a 64 Likert type survey. The average time to complete the survey was 10-15 minutes.

Demographic Elements and Control Variables

Contributors were asked to identify their gender, age, and employment status (will be attached in the appendices). Full-time employment status was a prerequisite for inclusion in this research, as current employees are most appropriate for data collection associated to compassion fatigue, burnout, and turnover intention. Employment status, gender, and age range were used as covariates in data analysis to rule out conceivable alternative hypotheses in connecting compassion fatigue and burnout to turnover intention.

Data Organization Plan

Data were collected by the online survey tool in Qualtrics and imported into Statistical Package for the Social Science – Version 26 (SPSS-26) upon close of the research. Data were secured in the online survey tool platform and the abovementioned software platforms through the requirement of a username and password authorizations. After the data were imported from

Qualtrics into the analysis software, the investigator created a reliable backup onto an encrypted external hard drive. The external hard drive is housed in a locked safe in which the researcher is the only person who has access to the data. Moreover, data were de-coded and scrutinized cumulatively to safeguard discrete responses that are not trackable and able to be compromised. Lastly, the data will be preserved and safeguarded for the customary three-year record preservation period after which the information will be deleted and overwritten.

Data Analysis

Statistical analyses were performed using Statistical Package for the Social Science – Version 26 (SPSS-26). The survey data from the quantitative study assessed the research questions to determine whether a correlation exists. Correlation is described as the linear relationship among variables to determine if one variable alters another (Bakotic & Krnic, 2017).

The researcher performed data collection methods that required an electronic means of surveying participants. The researcher aggregated the survey instruments and used Qualtrics to organize the data for cumulative analysis upon completion and distribute the surveys to the participants. Qualtrics® is a research survey company that is licensed to meet and maintain research ethics criteria designated by (Code of Federal Regulation) CFR 45.46 (Hodge & Gostin, 2017; Holt & Loraas, 2019). All scoring from the survey instruments included the participant demographic data, Maslach Burnout Inventory (MBI) Questionnaire, Professional Quality of Life Scale (ProQOL), and Anticipated Turnover Scale (ATS) scores, were imported and congregated into spreadsheets in planning for predictive analytics software.

The Likert-type ordinal data from the research instruments were coded into an interval scale of measurement to allow parametric testing. A random anonymous code was generated to replace the contributor's information to guarantee privacy in the survey, and all data acquired

through the survey were coded for data analysis. A significance criterion (α) of .05 was used for all statistical analyses (Falk & Wisheckel, 2018). The researcher used descriptive statistics to synopsize contributors' demographics. These results demonstrated standard deviations, frequency distributions, and mean scores for the criterion, predictor, and demographic variables (Malone & Coyne, 2017).

Variables Used in the Study

In this study, compassion fatigue and burnout are the independent variables for all research questions. The dependent variable is turnover intention. The moderating variables are acknowledged as gender, education level, years of service, personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within compassion fatigue and burnout. A confounding variable is the size of the organization. The variables, along with the data scale used and how the data will be calculated, is found in Table 1 and Table 2.

Table 1

Variables Used in the Study

Independent Variables	Compassion Fatigue-CF Burnout-BO
Dependent Variable	Turnover Intention-S1
Moderating Variables / Covariates	Gender – M1 Education – M2 Years of Service – M3 PA – M4 EE – M5 PA–M6

Table 2*Variable Description*

Research Variable	Variable Description	Data Scale	Initial Data Collection
Independent	Compassion Fatigue	Ordinal	Mean of Answers
Independent	Burnout	Ordinal	Mean of Answers
Dependent	Turnover Intention	Ordinal	Mean of Answers
Demographics	Age	Ratio	As Entered
Demographics	Gender	Nominal	
Demographics	Employment Status	Nominal	

Correlation Coefficient

Data sanitation was completed to improve the quality of data through the amendment of discovered errors and exclusions. This process encompasses completeness checks, threshold checks, and the examination of the data to recognize outliers or additional miscalculations (Sandström & Van den Besselaar, 2016). The researcher utilized the analytics software by testing whether the identified dependent and independent variables were positively correlated in the Alabama trauma center nurse sample. The data analysis techniques of Pearson correlation and Spearman's rho correlation for outcomes of compassion fatigue, burnout, and turnover intention are consistent with the procurement of responses and conclusions of the research questions and hypotheses (Zhou et al., 2016).

Pearson Correlation Coefficient

Parametric methods, such as the Pearson correlation coefficient, are versatile and informative. Pearson correlation coefficient establishes the strength and direction of the linear association between two variables (Bishara, 2012). The variables in this research have been evaluated on an ordinal scale. Nevertheless, all variables were not measured on equal scales—the

PROQOL variables were ranked 1 to 5, the MBI variables were ranked 0 to 6, and the ATS variables were ranked 1-7. The Pearson's correlation coefficient was utilized for normally distributed data. The majority of the data in these surveys was reasonably distributed, so inferences can be assumed about their means. In a study conducted by Bishara (2012), Pearson correlations and Spearman correlations were utilized where both generated approximately matching values, even with the use of non-normal, skewed data.

The intent of the Pearson r bivariate parameter test is to test whether a correlation or relationship between two variables exists. The Pearson correlation coefficient in each category has a measurement range between -1.0 and +1.0 with coefficients near 0, exhibiting a weak relationship of the variables and coefficients near -1.0 and +1.0 reflects a stronger relationship. Generally, coefficients more than .07 are labeled as strong, and coefficients less than .03 are measured weak. If a positive relationship is identified as one variable trends upward, the other variable should also trend upward (Jafary et al., 2020). A negative association is defined as if one variable trends upward, the other variable declines (Jafary et al., 2020). Pearson (r) offers a method to determine whether a connection exists among compassion fatigue, burnout, and turnover intention.

Spearman's Rank Correlation Coefficient

After a researcher chooses to perform a statistical test between Likert-type variables, it is practical to execute a Spearman rank-order correlation coefficient to conclude the strength of that relationship is among ordinal variables (Xiao, 2016). This procedure is commonly referred to as the Spearman's rho test in the discipline of statistics. The variables are ordinal since they have a consequential order to them (rank); thus, they can be examined using nonparametric statistics (Xiao, 2016). Spearman's rho was utilized for non-normally distributed data.

These data analysis methods support the fundamental theoretical framework and the discoveries of the research. Previous measurement literature has utilized direct correlations, such as studies targeting attaining suggestion of variable relationships (Trafimow, 2016). An inspection of contributor background data and how it impacted the variables was pertinent to this study to ascertain elements and dynamics contributing to connections and disparities among demographics.

The research questions were answered according to the statistical evaluation outcomes and compared with the literature review. The dependent variable is pertinent to healthcare leaders because it directly influences aggregate staffing costs and organizational profitability. The lower nursing turnover rates are, a reduced quantity of the workforce is comprised of newer personnel with less exposure to organizational practices, which improves quality care delivery and elevates patient satisfaction scores. Reduced nursing turnover rates also promote professional and organizational growth when there is an increased demand for healthcare services.

Reliability and Validity

This study used three well-known and tested instruments, the Professional Quality of Life Scale (ProQOL V), Maslach Burnout Inventory (MBI), and Anticipated Turnover Scale (ATS). Each of these instruments' reliability and validity has been validated and demonstrated consistently as they each continue to be the instruments of choice for evaluating compassion fatigue, burnout, and turnover intention. This section discussed the reliability and validity of each of these instruments as it related to this study.

Reliability

Reliability suggests that a test, process, or technique will generate consistent results each time it is utilized and measure the repeatability of research findings (Drost, 2011). Cronbach's alpha is the most commonly used internal reliability coefficient. This involves measuring the items' inter-relatedness in the test instrument concerning the intended construct or concept (Tavakol & Dennick, 2011). Typically, in research, an alpha of .70 or greater is considered suitable (Young, 2010). The ProQOL V, MBI, and ATS survey instruments have generated constant reliability coefficients through various uses.

The ProQOL-V is a 30-question self-report survey with three subscales: compassion satisfaction (CS), secondary traumatic stress (STS), and burnout (BO), the last two encompassing the theory of Compassion Fatigue (Stamm, 2010). The items are answered on a 5-point Likert scale ranging from very often to never (Stamm, 2010). The ProQOL-V scale reported internal consistency of $\alpha = 0.88, 0.82,$ and 0.86 for the subscales of Compassion Satisfaction (CS), Secondary Traumatic Stress (STS), and Burnout (BO), respectively (Duarte, 2017). In another study for the ProQOL-V, Stamm (2010) reported internal consistency of $\alpha = 0.88, 0.81,$ and 0.75 for CS, STS, and BO subscales.

The Maslach Burnout Inventory (MBI) is the most regularly used instrument for assessing burnout (Poghosyan et al., 2009). The Maslach Burnout theory rationalizes how burnout is evaluated using the MBI. The MBI consists of twenty-two questions. Nine questions calculate emotional exhaustion, five questions analyze depersonalization, and eight questions evaluate personal accomplishment (Maslach & Jackson, 1981). Cronbach's alpha was computed for the three dimensions of burnout measured by the MBI. Young's (2010) standard of reliability of at least 0.7 was applied to evaluate the internal reliability of the MBI in appraising the

contributors' levels of emotional exhaustion, depersonalization, and personal accomplishment. Wickramasinghe et al. (2018) reported internal consistency correlation values of 0.858, 0.910, and 0.890, respectively.

The Anticipated Turnover Scale (ATS) is used to index personnel's opinion or perception of the probability of voluntarily leaving his or her current job. The self-report ATS instrument contains 12 items in Likert-format with seven response options ranging from agree strongly to disagree strongly. Questions were related to one's predicted length of time to leaving and confidence in leaving the organization. Hinshaw et al.'s (1985) study using the ATS produced a Cronbach's alpha score of 0.84 (Barlow & Zangaro, 2010; Hinshaw et al., 1985). Because Young's threshold of 0.7 was fulfilled for the ProQOL V, MBI, and ATS, the surveys are endorsed as reliable.

Validity

An instrument's validity refers to how accurate it measures what it was intended to (Drost, 2011). In quantitative research, the instruments and means used during a given study must be reliable and valid for that study to have any value. The investigator utilized existing scales with sensible reliability and validity approximations. According to Creswell (2014), it is imperative to guarantee internal validity if the results of any given study are trustworthy, mainly if the aim is to generalize a specific sample size to the overall population.

Content validity is a measure of the extent to which items contained in the instrument's scale denote accurate information about what is being assessed and is usually done by a panel of experts in the related field (Almanasreh et al., 2019). Wickramasinghe et al. (2018) reviewed content, criterion, and construct validity to ensure instruments are accurately measuring predetermined criteria and appropriate to real-world situations. Instrument validity suggests the

degree an instrument asserts to measure and validated through confirmatory factor analysis (CFA) or Cronbach's alpha (DeMonbrun et al., 2017; DeSmet et al., 2018).

Watts and Robertson (2015) and Hemsworth et al. (2018) used both CFA and multi-trait scaling analysis to demonstrate the adequacy in the construct validity of the ProQOL-V instrument used in their respective studies. Similarly, Geoffrion et al. (2019) embarked on assessing the construct validity of the ProQOL-V instrument from child protection workers using CFA and found that the construct validity of the ProQOL-V scale in its two-factor structure was supported. According to Stamm (2010), the ProQOL-V instrument has been used in more than 100 research projects, employed in more than 200 published papers, and quoted in more than 100 articles, determining the tool's construct validity. Consequently, the ProQOL-V can be considered a valid tool for assessing a given professional population's quality of life.

In the Wickramasinghe et al. (2018) study, CFA discovered that the tri-dimensional structure of the MBI-SS was more appropriate for the data than the one-dimensional and two-dimensional models. All three subscales demonstrated extraordinary internal consistency with high test-retest reliability high ($p < 0.001$) and Cronbach's α coefficient values of 0.837, 0.869, and 0.881. Barlow and Zangaro (2010) performed a meta-analysis involving registered nurses in the United States to confirm the ATS's construct validity. The findings supported consistency in the construct validity of the ATS instrument due to the negative overall mean correlation coefficient (-0.529) between ATS and job satisfaction across the studies (Barlow & Zangaro, 2010).

External validity is defined as applying the conclusions of a study to populations outside of that studied (Robinson et al., 2016). The sampling method not being followed as outlined in the research design is the principal threat to external validity. The external validity in this

research refers to applying the data from trauma centers across various geographic locations.

Sample size can decrease the research's generalizability because of the nature of the individual sample (Gilles et al., 2017).

Summary of Reliability and Validity

In quantitative research, the means and instruments utilized in a research study must be reliable and valid for that study to have any credibility or for the results to be acknowledged.

This research used three instruments, the ProQOL V, MBI, and ATS. All three of these instruments have been proven through statistical analysis to be reliable and valid. This consistency makes them trustworthy when studying compassion fatigue, burnout, and turnover intention.

Summary of Section 2 and Transition

In Section 1, the emphasis was on defining the problem to be studied which developed the construction of a problem statement followed by an explanation of the nature of the study and subsequent research questions, the succeeding hypotheses, and literature review. Following the establishment of the foundation, Section 2 summarized the methodology element of the study. The role of the researcher was defined, the participants and the research methods and designs were selected. Also, the population was designated along with the sampling strategy, survey instruments that will be utilized, as well as data collection techniques. The conclusive element was a rationalization for the selection of instruments through the reliability and validity of the chosen instruments. Section 3 will deliver a practical application of the research's findings and implications for change.

Section 3: Application to Professional Practice and Implications for Change

In Section 3, the researcher includes a concise overview of the study and a presentation of the findings, including instrument data, analysis, conclusions, and evidence related to the study's research questions and hypotheses. Additionally, this section discusses applications to the professional practice of business and recommendations for action and further study. Lastly, Section 3 and the study's body resolves with reflections from the researcher and a summary and study conclusion.

Overview of the Study

This study was conducted to examine the relationships between compassion fatigue and burnout to Alabama trauma center nurses' turnover intention. The research was initiated as an approach to study the specific factors that influence the development of compassion fatigue and nursing burnout and the correlation to turnover intention in trauma centers in Alabama. A combined survey instrument was used to test Maslach and Jackson's (1981) burnout constructs (MBI) in conjunction with Stamm and Figley's (1995) Professional Quality of Life Scale (ProQOL) and Hinshaw et al.'s (1985) Anticipated Turnover Scale (ATS). A quantitative, correlational study was employed, and three research questions were devised.

The central research question was: To what extent, if any, is there a relationship between compassion fatigue, burnout, and turnover intention in the trauma center nurses? The second research question was: To what extent, if any, is there a relationship between compassion fatigue, burnout, and turnover intention in the trauma center nurses for specific demographics such as gender, level of education, and years of service as a nurse? The final research question was: To what extent, if any, is there a relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within

compassion fatigue, burnout, and employees' attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses?

Presentation of the Findings

The findings' presentation specifies a narrative of the survey response rate, procedures, and process. Demographic data from the participants is also evaluated and displayed in a table. Additionally, hypothesis testing is discussed relative to the research questions. Data analysis will be presented for the three hypotheses individually. All statistical tests and analyses were completed using SPSS version 26. Pearson correlation coefficient and Spearman's correlation coefficient (Spearman's rho) were employed to investigate the strength of correlation between the independent variables, compassion fatigue, burnout, and the dependent variable, turnover intention. Further normality analysis entailed the visual inspection of frequency histograms and Q-Q plots along with the measuring of skewness for determination of normal distribution within a satisfactory range.

Reliability and Validity

Before executing statistical analyses to evaluate the research hypotheses, reliability testing was performed with Cronbach's alpha on the survey instrument variables. This is done to confirm that variable scales are appropriate for conducting the research. This study used three popular and tested instruments, the Professional Quality of Life Scale (ProQOL V), Maslach Burnout Inventory (MBI), and Anticipated Turnover Scale (ATS). The reliability and validity of each of these instruments have been validated and demonstrated consistently as they each continue to be the instruments of choice for evaluating compassion fatigue, burnout, and turnover intention. Typically, in research, an alpha of .70 or greater is considered suitable

(Young, 2010). The ProQOL V, MBI, and ATS survey instruments have generated constant reliability coefficients through various uses.

The ProQOL-V is a 30-question self-report survey with three subscales: compassion satisfaction (CS), secondary traumatic stress (STS), and burnout (BO), the last two encompassing the theory of Compassion Fatigue (Stamm, 2010). The items are answered on a 5-point Likert scale ranging from very often to never (Stamm, 2010). The ProQOL-V scale reported internal consistency of $\alpha = 0.88, 0.82,$ and 0.86 for the subscales of Compassion Satisfaction (CS), Secondary Traumatic Stress (STS), and Burnout (BO), respectively (Duarte, 2017). The Cronbach's α scores for the present study for CS, STS, and BO were $0.95, 0.87,$ and $0.90,$ correspondingly (Table 3).

The MBI consists of 22 questions. The items are answered on a 7-point Likert scale ranging from every day to never. Nine questions calculate emotional exhaustion, five questions analyze depersonalization, and eight questions evaluate personal accomplishment (Maslach & Jackson, 1981). Cronbach's alpha was computed for the three dimensions of burnout measured by the MBI. Wickramasinghe et al. (2018) reported internal consistency correlation values of $0.858, 0.910,$ and 0.890 for emotional exhaustion, depersonalization, and personal accomplishment, respectively. The Cronbach's α scores for the present study for emotional exhaustion, depersonalization, and personal accomplishment, were $0.94, 0.82,$ and $0.85,$ correspondingly (Table 3).

The ATS is used to index personnel's opinion or perception of the probability of voluntarily leaving his or her current job. The self-report ATS instrument contains 12 items in Likert-format with seven response options ranging from agree strongly to disagree strongly. Questions were related to one's predicted length of time to leaving and confidence of leaving the

organization. Hinshaw et al.'s (1985) study using the ATS produced a Cronbach's alpha score of 0.84 (Barlow & Zangaro, 2010; Hinshaw et al., 1985). The Cronbach's α score for the present study for the turnover intention was 0.85 (Table 3).

Table 3

Survey Instrument Reliability

Variable	Cronbach's Alpha	N of Items
ProQol-CS	0.945	10
ProQol-BO	0.9	10
ProQol-STS	0.87	10
MBI-EE	0.94	9
MBI-DP	0.823	5
MBI-PA	0.858	8
ATS	0.851	12

Description of Response Rate

The survey was made available to potential participants from October 16, 2020 through November 16, 2020 by open invitation, via email, and posts on social media. Each of the emails and posts asked the receiver to participate in the survey and share it with their colleagues. Of 409 responses to the survey, 19 were disqualified (under 18 years old, did not work full-time in an Alabama trauma center, or did not have one year of experience working in an Alabama trauma center as a nurse), eight did not complete the survey. The remaining 382 responses were complete and used as the data for this research, exceeding the needed 370 participants. This number far satisfied the minimum sample size suggested by Creative Research Systems of at least 370 survey participants at a 95% confidence interval, so the number of survey responses was considered representative of the entire population.

The survey asked respondents to self-report. Screener questions were used to eliminate

any participants who did not meet the qualifying conditions of being trauma center nurses over the age of 18 that are employed full-time and have one year of experience in that role. Finally, the force response option was used to alert respondents if they did not answer a question to increase the probability of survey completion.

Demographic Data

Participant characteristics were requested as part of the survey. Demographic information such as age, gender, and years of experience as a registered nurse and was gathered.

Additionally, data were collected related to the number of hours worked and the highest level of education. This information has been displayed below in Tables 4 through 6.

Table 4

Distribution of Demographic Variable: Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	342	89.5	89.5	89.5
	Male	40	10.5	10.5	100.0
Total		382	100.0	100.0	

Table 4 shows that most of the survey participants were female. At 89.5% female, gender distribution represents national data that show 90.9% of nurses are female (NCSBN, 2017). The gender demographic findings are also representative of the overall population of full-time nurses employed in Alabama.

Table 5*Distribution of Demographic Variable: Age*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	48	12.6	12.6	12.6
	25-34	126	33.0	33.0	45.5
	35-44	77	20.2	20.2	65.7
	45-54	84	22.0	22.0	87.7
	55-64	43	11.3	11.3	99.0
	65 or	4	1.0	1.0	100.0
	Total	382	100.0	100.0	

Table 5 displays that 65.7% of the contributors are under the age of 45. National data demographics for nurses suggest that most of nurses are under 45 and that the median age is 51 (NCSBN, 2017). This is a generalizable sample of the national nursing population.

Table 6*Distribution of Demographic Variable: Education*

	Frequency	Percent	Valid Percent	Cumulative Percent
Associate's degree	168	44.0	44.0	44.0
Bachelor's degree	183	47.9	47.9	91.9
Doctoral or Prof	1	.3	.3	92.1
Master's degree	30	7.9	7.9	100.0
Total	382	100.0	100.0	

Table 6 displays that 47.9% of the contributors report a bachelor's degree as the highest

education level. National data demographics for nurses indicate that 41.7% of nurses report a bachelor's degree as the highest education level (NCSBN, 2017). This is a generalizable sample of the national nursing population.

Table 7

Distribution of Demographic Variable: Experience

	Frequency	Percent	Valid Percent	Cumulative Percent
1-5	120	31.4	31.4	31.4
6-10	64	16.8	16.8	48.2
11-15	42	11.0	11.0	59.2
16-20	52	13.6	13.6	72.8
>20	104	27.2	27.2	100.0
Total	382	100.0	100.0	

Table 7 displays that 31.4% of the respondents report have less than six years of experience as nurses. These findings indicate that most participants are experienced nurses and have worked for more than five years as a registered nurse.

Demographic Summary

The data gathered for age, gender, the highest level of education, and years of experience were utilized to address Research Question 2. Moreover, demographics were gathered to confirm that the study conclusions represented the nurse population in Alabama and nationally. Results show that most study participants were young females with greater than five years of experience as an Alabama trauma center nurse. Overall findings indicate a generalizable sample and support the applicability and soundness and of the conclusions.

Descriptive Statistics

PROQOL survey. The scoring system of the Professional Quality of Life (ProQOL; Stamm, 2009) was used to analyze the raw sub-scale mean scores. The ProQOL (Stamm, 2009) is a self-report instrument that calculates compassion fatigue by observing the sub-scales of compassion satisfaction, burnout, and secondary traumatic stress/ compassion fatigue (Stamm, 2009) by allowing the respondent to rate occurrences. Participants rated each item with the following response 1=Never, 2=Rarely, 3=Sometimes, 4=Often, and 5=Very Often (Stamm, 2009). Each subscale average was compared to the rating system of the Professional Quality of Life (ProQOL; Stamm, 2009).

Table 8 shows the means and standard deviations for compassion satisfaction (CS), burnout (BO), and secondary traumatic stress (STS). Based on data analysis and the PROQOL scoring key in Appendix F, the average of contributing nurses had a CS score of 49.98, correlating to an average level of compassion satisfaction. The average of participating nurses had a mean BO score of 50.02, correlating to an average level of burnout and the average participating nurses had a mean CF score of 50.02, correlating to an average level of compassion fatigue. These are all within the normal range according to the scoring key.

Table 8

PROQOL Statistics

	N	Min	Max	Mean	Std. Deviation	Skewness	Kurtosis	
Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
CS	382	29.59	69.44	49.9812	10.00639	0.129	0.125	-1.172
BO	382	26.36	74.08	50.0238	10.00142	0.029	0.125	-0.976
STS	382	34.42	85.05	50.028	9.99808	0.555	0.125	-0.282

The researcher used descriptive statistics (Tables 8-9), a histogram (Figure 5), skewness (Table 9), Q-Q plot (Figure 6) to evaluate the normality of the PROQOL data distribution. Figure

Figure 5

Histogram-CS

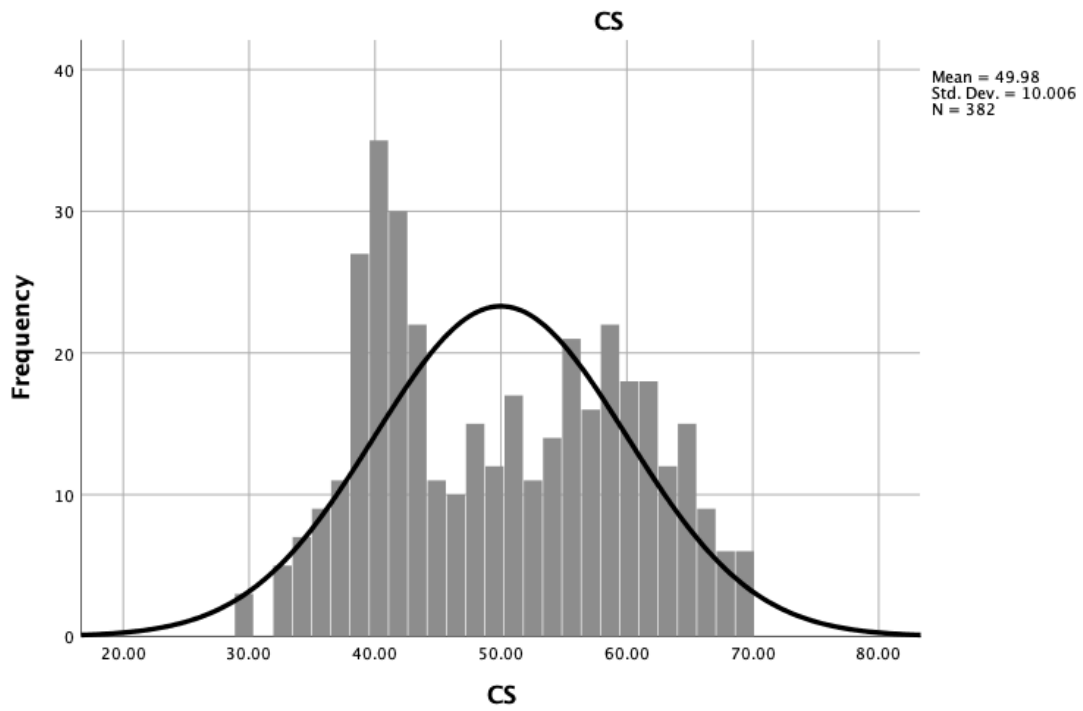
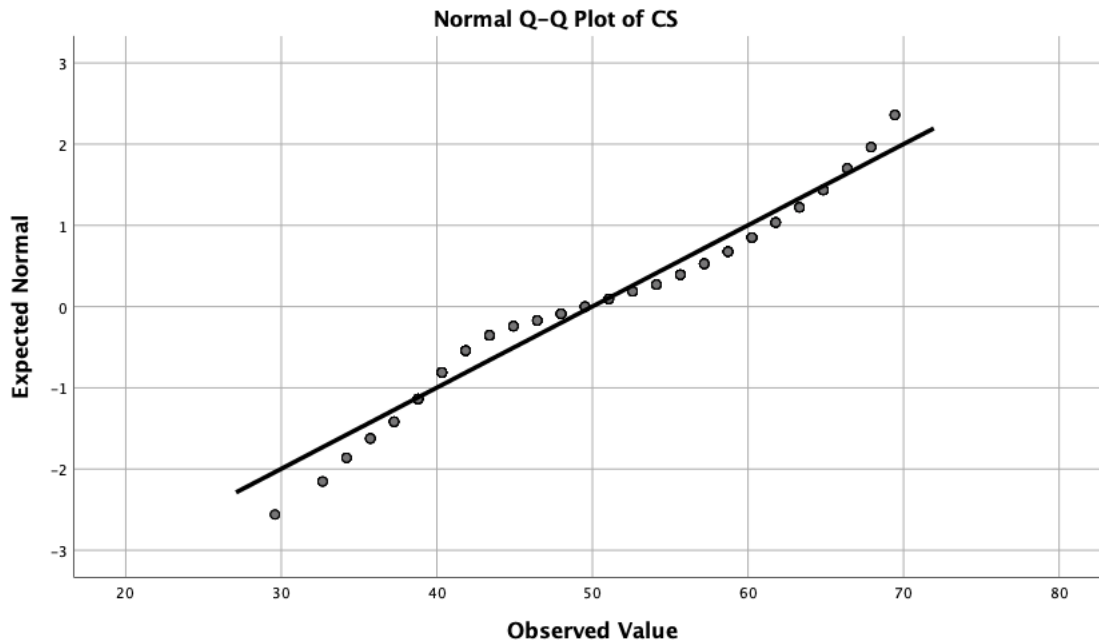


Figure 6*Q Plot-CS*

From the frequency histogram in Figure 7 the PROQOL-BO data are relatively normally distributed with minimal skewness. The histogram has a prominent mound in the center and with tapering to the left and right. Descriptive analysis revealed a skewness statistic of .029 (Table 9) for PROQOL-BO indicated a standard curve that was not markedly skewed (Figure 7). From the normal Q-Q plot in Figure 8, the PROQOL-BO data are normally distributed as the data points are close to the diagonal line and verify the data are distributed normally.

Figure 7

Histogram-BO

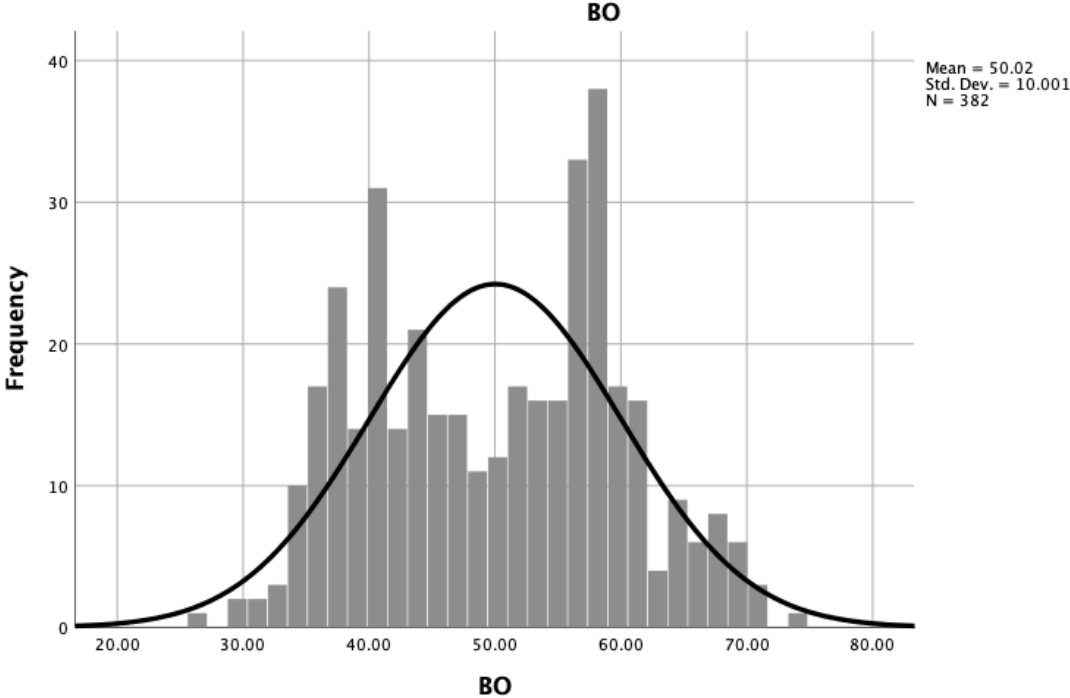
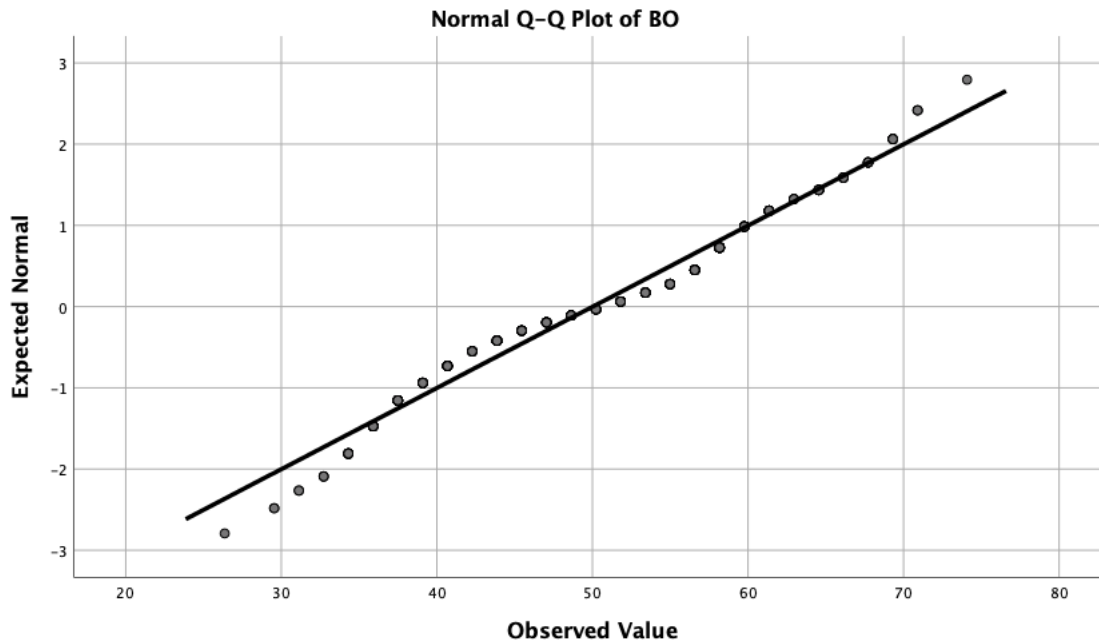


Figure 8*Histogram-Normal Q-Q Plot of BO*

From the frequency histogram in Figure 9 the PROQOL-STTS data are relatively normally distributed with minimal skewness as the bars are slightly skewed to the right. The histogram has a prominent mound in the center and with tapering to the right. Descriptive analysis revealed a skewness statistic of .555 for PROQOL-STTS (Table 9) indicated a normal curve that was not markedly skewed. From the normal Q-Q plot in Figure 10, the PROQOL-STTS data are normally distributed as the data points are close to the diagonal line and verifies the data are distributed normally.

Figure 9

Histogram - STS

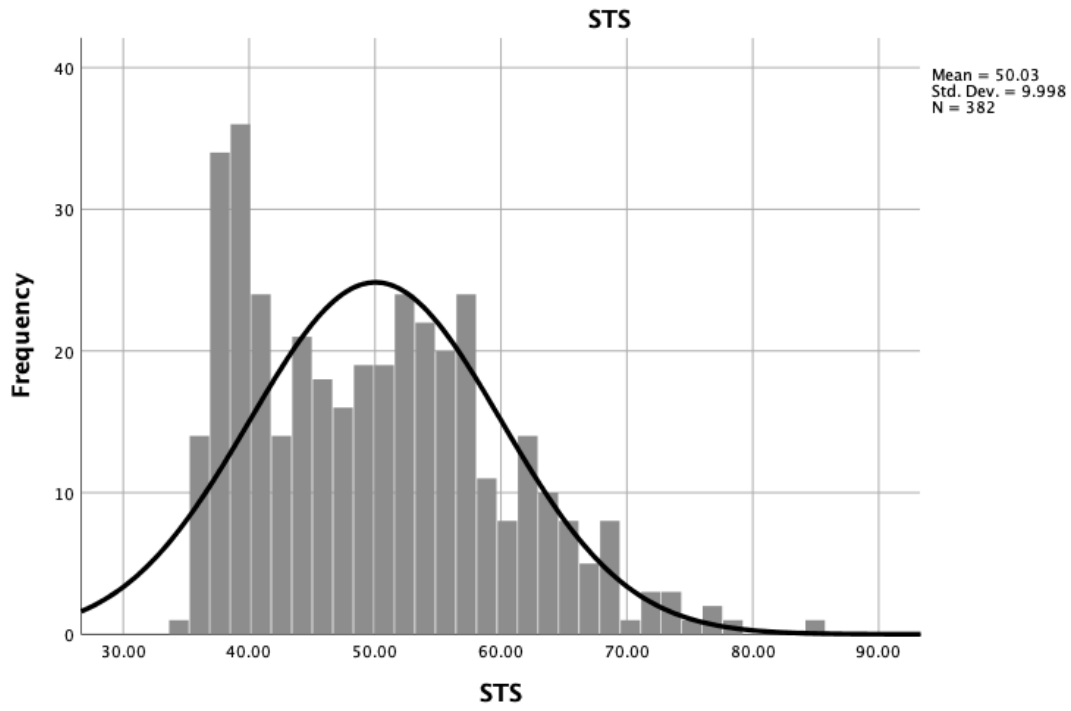
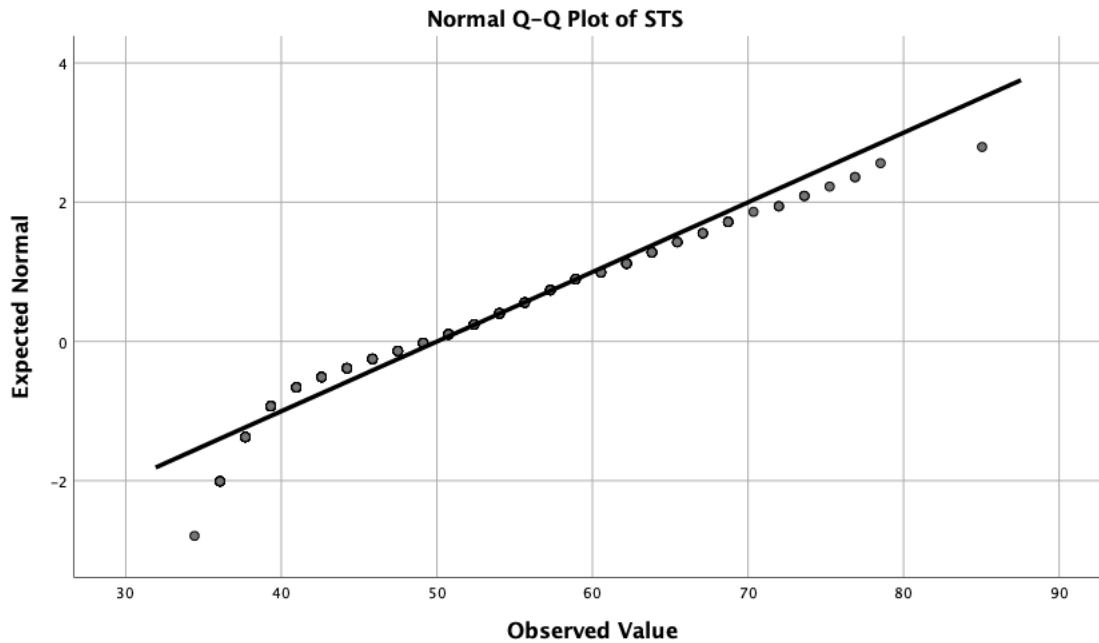


Figure 10*Q Plot-STIS****MBI***

The scoring system of the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981) was used to analyze the raw sub-scale mean scores. The MBI is a self-report instrument that calculates burnout by observing the sub-scales of emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA; Maslach & Jackson, 1981) by allowing the respondent to rate occurrences. Participants rated each item on a 7-point Likert-type with the following response 0 = never, 1 = a few times a year or less, 2 = once a month or less, 3 = a few times a month, 4 = once a week, 5 = a few times a week, 6 = every day (Maslach & Jackson, 1981). Each subscale average was compared to the rating system of the MBI (Maslach & Jackson, 1981). Scales are scored such that higher scores indicate more of each concept. Higher scores on the EE and DP subscales indicate a higher burnout symptom presence; lower scores on the PA subscale indicate a higher indication of burnout.

Table 10 shows the means and standard deviations for emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA). Based on data analysis and the MBI-HSS scoring key in Appendix E, the average of contributing nurses had an EE score of 29.38, correlating to a high level of burnout. Based on the MBI-HSS scoring key in Appendix E, the average participating nurses had a mean DP score of 5.66, correlating to a low level of burnout. Based on the MBI-HSS scoring key in Appendix E, the average participating nurses had a mean PA score of 40.40, correlating to low burnout levels. Collectively, this results in nursing participants having low to high levels of burnout.

Table 10

Descriptive Statistics EE, DP, PA

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis	
Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
EE	382	2	54	29.3796	11.25766	-0.256	0.125	-0.747
DP	382	0	29	5.6649	5.84649	1.494	0.125	1.99
PA	382	8	48	40.4031	5.47912	-1.752	0.125	5.25

The researcher used descriptive statistics (Tables 8-9), histogram (Figure 11), skewness (Table 9), and Q-Q plot (Figure 12) to evaluate the normality of the MBI data distribution. Figure 11 displays the frequency histogram of MBI subscale scores. To determine normality graphically, the researcher generated an output of a frequency histogram for the MBI scores. From the frequency histogram in Figure 11, the MBI-DP data are non-normal and distributed with skewness to the right. The histogram has a prominent mound on the left with tapering to the right. Descriptive analysis revealed a skewness statistic of 1.494 (Table 9) for MBI-DP which was indicative of a markedly skewed distribution. From the normal Q-Q plot in Figure 12, the MBI-DP data are not normally distributed as the data points stray from the diagonal line and verifies the data are non-normal.

Figure 11

Histogram-DP

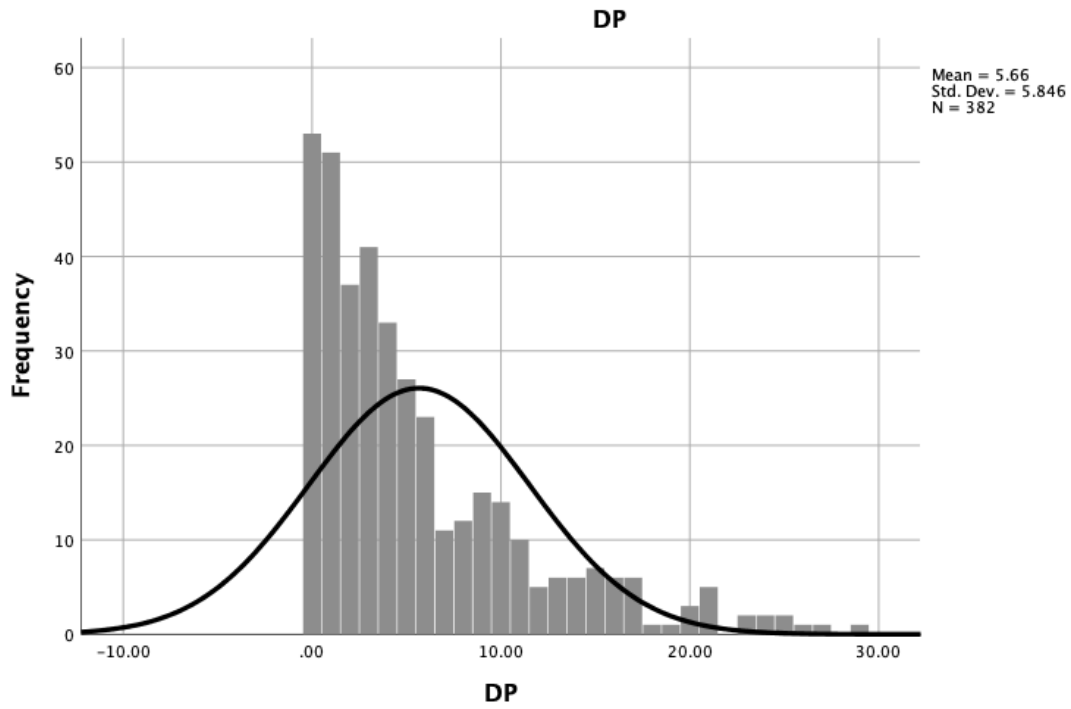
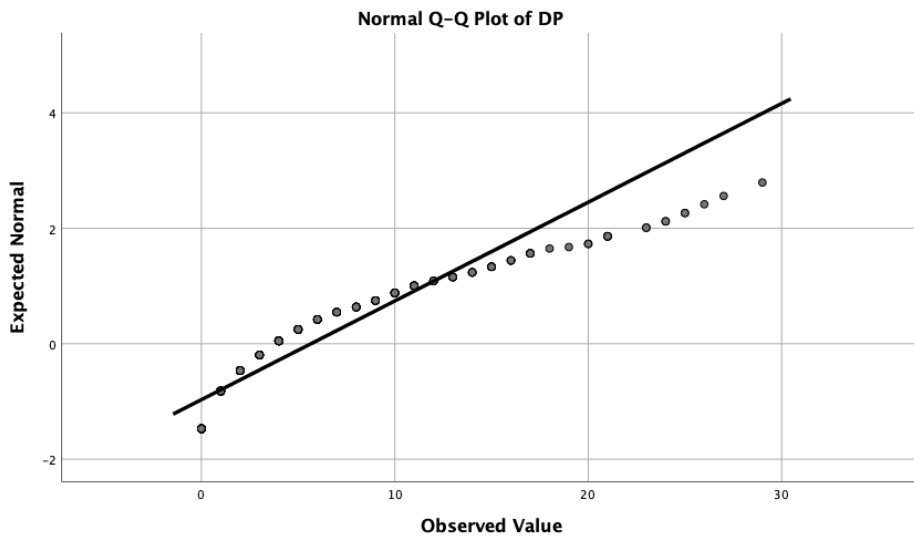


Figure 12

Q Plot-DP



From the frequency histogram in Figure 13, the MBI-EE data are relatively normally distributed with minimal skewness. The histogram has a prominent mound in the center and with tapering to the left and right. Descriptive analysis revealed a skewness statistic of $-.256$ for MBI-EE (Table 9) indicated a normal curve that was not markedly skewed. From the normal Q-Q plot in Figure 14, the MBI-EE data are normally distributed as the data points are close to the diagonal line and verify the data are distributed normally.

Figure 13

Histogram-EE

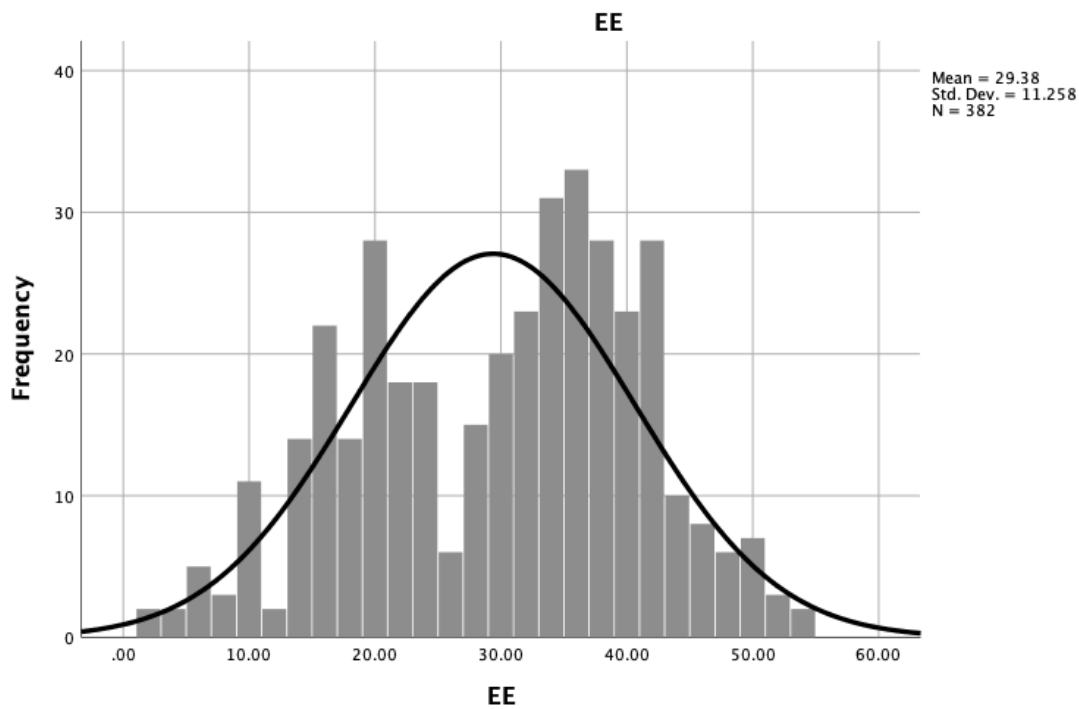
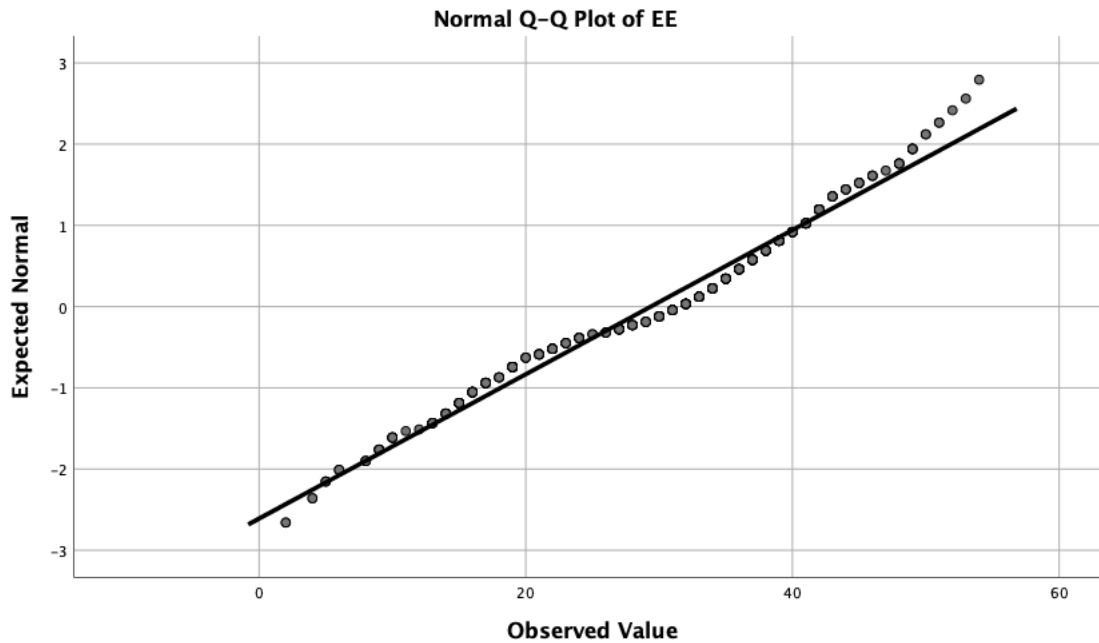


Figure 14*Q Plot EE*

To determine normality graphically, the researcher generated an output of a frequency histogram for the MBI scores. From the frequency histogram in Figure 15 the MBI-PA data are non-normal and distributed with skewness to the left. The histogram has a prominent mound on the right with tapering to the left. Descriptive analysis revealed a skewness statistic of -1.752 (Table 9) for MBI-PA which was indicative of a markedly skewed distribution. From the normal Q-Q plot in Figure 16, the MBI-PA data are not normally distributed as the data points stray from the diagonal line and verifies the data are non-normal.

Figure 15

Histogram-PA

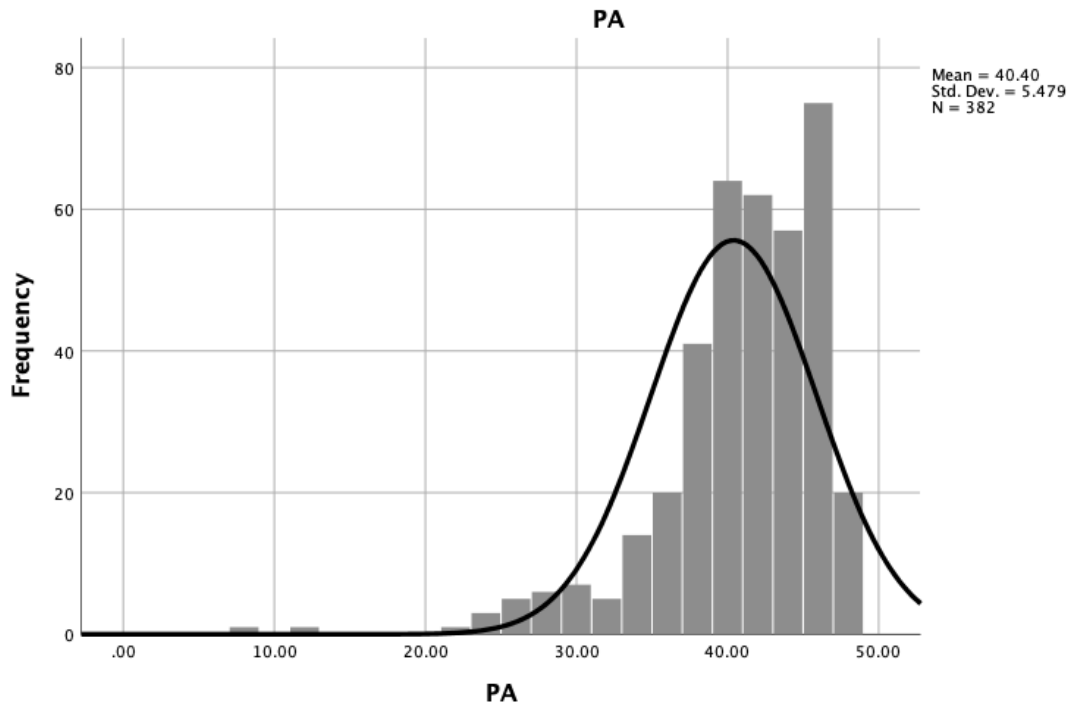
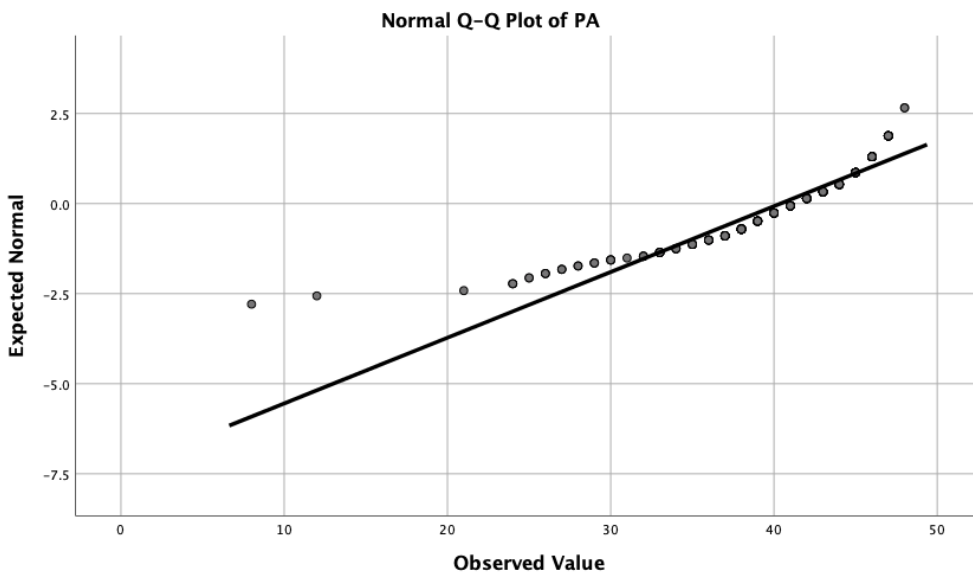


Figure 16

Q Plot-PA



ATS

The Anticipated Turnover Scale (ATS) was used to measure the nurse's intent to leave the organization. The Anticipated Turnover Scale (ATS) is a 12-item, Likert-type scale with a range of responses from 1 (strongly disagree) to 7 (strongly agree). The calculated score ranges from 1 to 7; a higher score indicates a higher intent to leave (Adams et al., 2019). For scoring of this research, the range for intent to leave is 1 for low, up to 7 for high intent. A score of 3.5 designates a moderate intent to leave. Table 11 shows the means and standard deviations for turnover intention. Based on data analysis, the nurses' mean turnover intention score was 3.98, indicating a moderate to a high level of turnover intention.

Table 11*Turnover Intention Descriptive Statistics*

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Std. Error	Kurtosis	Std. Error
Turnover Intention	382	1.00	6.92	3.9791	1.37575	-.107	.125	-1.388	.249

The researcher used descriptive statistics (Tables 8 & 11), a histogram (Figure 17), skewness (Table 9), Q-Q plot (Figure 18) to evaluate the normality of the ATS data distribution. To determine normality graphically, the researcher generated an output of a frequency histogram. From the frequency histogram in Figure 17, the ATS data are relatively normally distributed with minimal skewness. The histogram has a prominent mound in the center and with tapering to the left and right. Descriptive analysis revealed a skewness statistic of -.107 (Table 9) for TI indicated a normal curve that was not markedly skewed. From the normal Q-Q plot in Figure 18,

the TI data are normally distributed as the data points are relatively close to the diagonal line and verify the data are distributed normally.

Figure 17

Histogram-TI

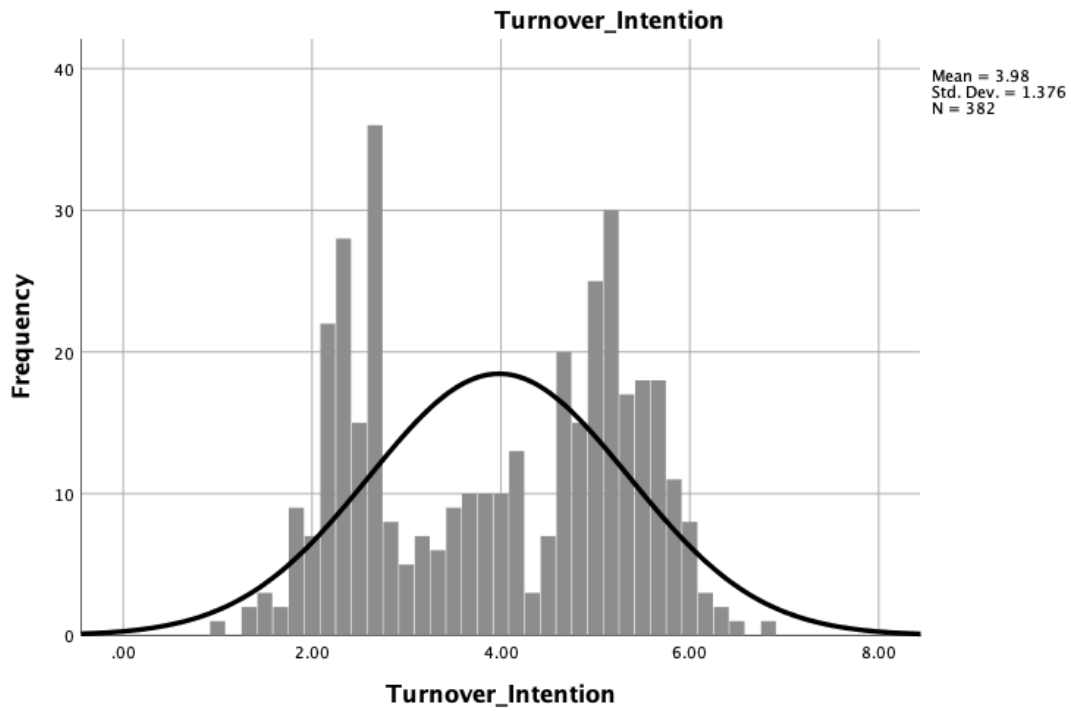
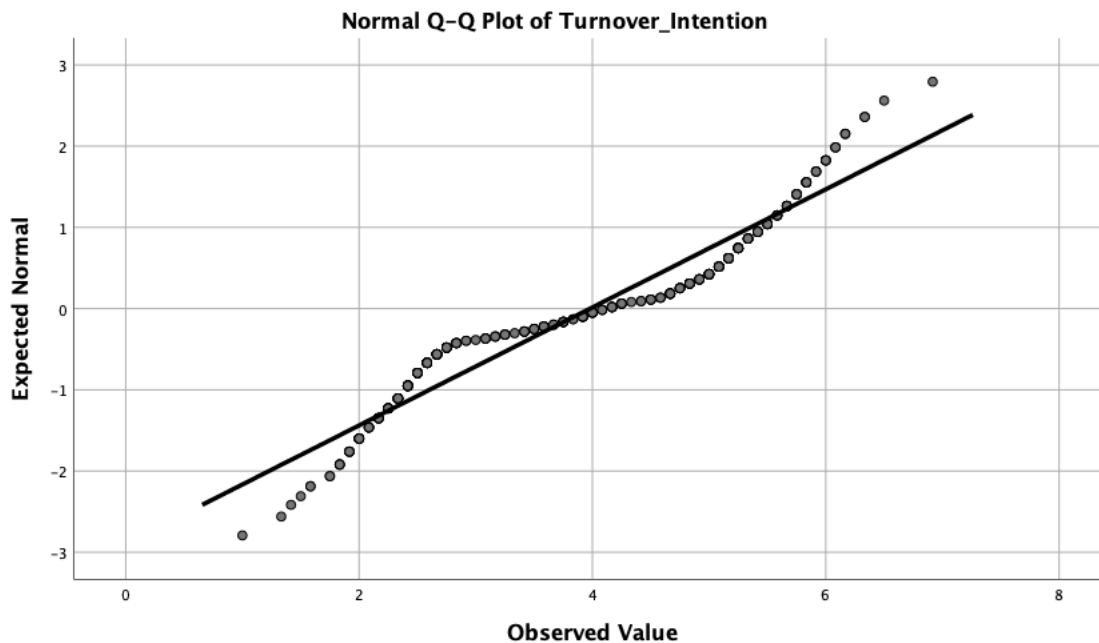


Figure 18*Q Plot-TI*

Hypothesis Testing

The presentation of the findings section concentrated on demographic data acquired from the study, evaluations of internal reliability among constructs within the designed framework, as well as confirmation for normality allowing for the use of parametric statistical measurements and use of non-parametric statistics for non-normal data. The emphasis in this portion is on the use of inferential statistics to assess each of the three hypotheses propositioned and outlined in Sections 1 and 2. The decision to reject or fail to reject was evaluated against a 95% confidence level, which is defined as there is a five percent probability of incorrectly rejecting the null hypothesis when it is in fact true (Type I error). The subsequent hypotheses were all tested using the p-statistic where $p \leq .05$ was rejected, and the researcher failed to reject a value of $p > .05$.

The purpose of this correlational research was to address the gaps in pragmatic data regarding the relationship between compassion fatigue, burnout, and turnover intention. In this

research, the researcher recognized compassion fatigue and burnout as the independent variables and turnover as the dependent variable. Proving the correlation between the variables, compassion fatigue, burnout, and turnover intention shapes the foundation of the hypotheses. The researcher analyzed the null hypotheses based on the sample of the outlined population and performed the Pearson correlation coefficient (Pearson's r) and Spearman rho (Spearman's r) to determine with a probability ($p < 0.05$) that findings in the sample may also be discovered in the population at a 95% confidence level.

Data collected by the PROQOL, MBI, and ATS instruments were standardized by finding the z-score for responses. The hypotheses aimed to determine the relationship between compassion fatigue, burnout, and turnover intention. The researcher performed Pearson correlation coefficient and Spearman rho using statistical software analysis to measure the strength of correlation between the independent and dependent variables. A 2-tailed significance was chosen to show both positive and negative correlations.

Hypothesis 1

Research Question 1 asked, "To what extent, if any, is there a relationship between compassion fatigue, burnout, and turnover intention in the trauma center nurses?" Hypothesis 1 focuses on the relationship between compassion fatigue and burnout to turnover intention in trauma center nurses.

H10: There is no statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses.

H1a: There is a statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses.

The 382 responses were used to determine the effects of the independent variables,

compassion fatigue, and burnout on the dependent variable, turnover intention. The researcher performed the Pearson correlation coefficient (r) via statistical software to evaluate the strength of association between the independent and dependent variables. The correlational design to test H01 utilized the TI, BO, STS, EE, and DP data for the sample ($N = 382$) (compassion fatigue is measured by BO and STS on the PROQOL scale and burnout is measured by EE and DP on the MBI scale (Maslach & Jackson, 1984; Stamm, 2009). Table 12 displays the Pearson correlation coefficient for the null hypothesis H01.

Table 12*RQ1 Pearson's Correlations*

		Turnover Intention	BO	STS	EE	DP
Turnover Intention	Pearson Correlation	1	.797**	.571**	.784**	.392**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	382	382	382	382	382
BO	Pearson Correlation	.797**	1	.766**	.860**	.576**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	382	382	382	382	382
STS	Pearson Correlation	.571**	.766**	1	.687**	.669**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	382	382	382	382	382
EE	Pearson Correlation	.784**	.860**	.687**	1	.573**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	382	382	382	382	382
DP	Pearson Correlation	.392**	.576**	.669**	.573**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	382	382	382	382	382

** . Correlation is significant at the 0.01 level (2-tailed).

Pearson's r resulted in the moderate to a strong relationship ($N = 382$) $r = 0.797, 0.571, 0.784, 0.392$ with TI's relationship to BO, STS, EE, and DP, respectively and $p < .01$ against the null hypothesis H01 for all variables. Therefore, the researcher rejected the null hypothesis H0:

There is no statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses, validating the correlation between compassion fatigue, burnout, and turnover intention. When the null hypothesis is true and is rejected, a type I error has been committed. The likelihood of committing a type I error is α , which is the level of significance designated for the hypothesis test. An α of 0.05 specifies that a researcher will accept a 5% probability that the null hypothesis has been rejected in error. To reduce this possibility, a lower α value can be selected. Conversely, choosing a reduced alpha value signifies that the researcher is less likely to perceive an accurate disparity if one exists. Since the correlation is significant at the .01 level, there is a 1% chance the researcher will reject the null hypothesis when the null is true reducing the opportunity for a Type I error (Ateş, 2019). Figures 19-22 indicate a positive relationship between compassion fatigue, burnout and turnover intentions (as compassion fatigue and burnout increase, turnover intention increases).

The result of normality testing of PROQOL, MBI, and ATS scores, using the histogram, skewness, and Q-Q plot, confirmed the TI, BO, STS, and EE data distributions are normal and the DP data distributions are non-normal. This suggests that parametric and nonparametric statistics should be utilized to examine the relationship between compassion fatigue, burnout, and turnover intention. Based on the data's variable type and distribution, the most meaningful parametric statistics to examine the relationship between the variables were determined to be Pearson's r . After the DP scores failed the normality tests, the researcher employed the non-parametric Spearman's correlation coefficient (Spearman's ρ).

The researcher executed a Spearman ρ (r_s) by using SPSS-26 to measure the strength of correlation between the independent and dependent variables. The correlational design to test

H₀₁ utilized the PROQOL, MBI and ATS data for the sample (N = 382). Table 13 displays Spearman's rho for the null hypothesis H₀₁.

Table 13

RQ1 Spearman's Correlations

		Turnover					
		Intention	BO	STS	EE	DP	
Spearman's rho	Turnover Intention	Correlation Coefficient	1.000	.776**	.597**	.757**	.555**
		Sig. (2-tailed)	.	.000	.000	.000	.000
		N	382	382	382	382	382
BO		Correlation Coefficient	.776**	1.000	.781**	.854**	.718**
		Sig. (2-tailed)	.000	.	.000	.000	.000
		N	382	382	382	382	382
STS		Correlation Coefficient	.597**	.781**	1.000	.719**	.754**
		Sig. (2-tailed)	.000	.000	.	.000	.000
		N	382	382	382	382	382
EE		Correlation Coefficient	.757**	.854**	.719**	1.000	.717**
		Sig. (2-tailed)	.000	.000	.000	.	.000
		N	382	382	382	382	382
DP		Correlation Coefficient	.555**	.718**	.754**	.717**	1.000
		Sig. (2-tailed)	.000	.000	.000	.000	.
		N	382	382	382	382	382

** . Correlation is significant at the 0.01 level (2-tailed).

Spearman rho (rs) resulted in the moderate to strong relationship ($N = 382$) $r = 0.776$, 0.597 , 0.757 , 0.555 with TI's relationship to BO, STS, EE, and DP, respectively and $p < .01$ against the null hypothesis H₀₁ for all variables. Therefore, the researcher again rejected the null hypothesis H₀: There is no statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses, validating the correlation between

compassion fatigue, burnout, and turnover intention. Figures 19-22 indicate a positive relationship between compassion fatigue, burnout and turnover intentions (as compassion fatigue and burnout increase, turnover intention increases).

Figure 19

Scatterplot TI to BO

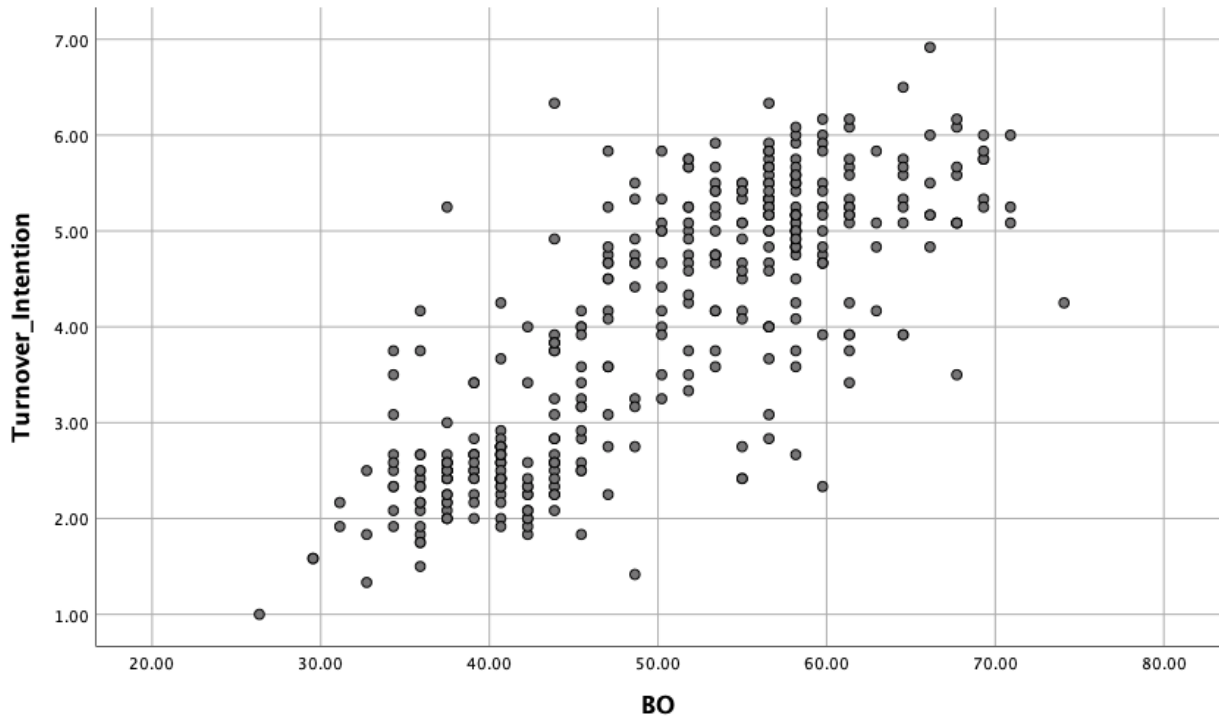


Figure 20

Scatterplot TI to STS

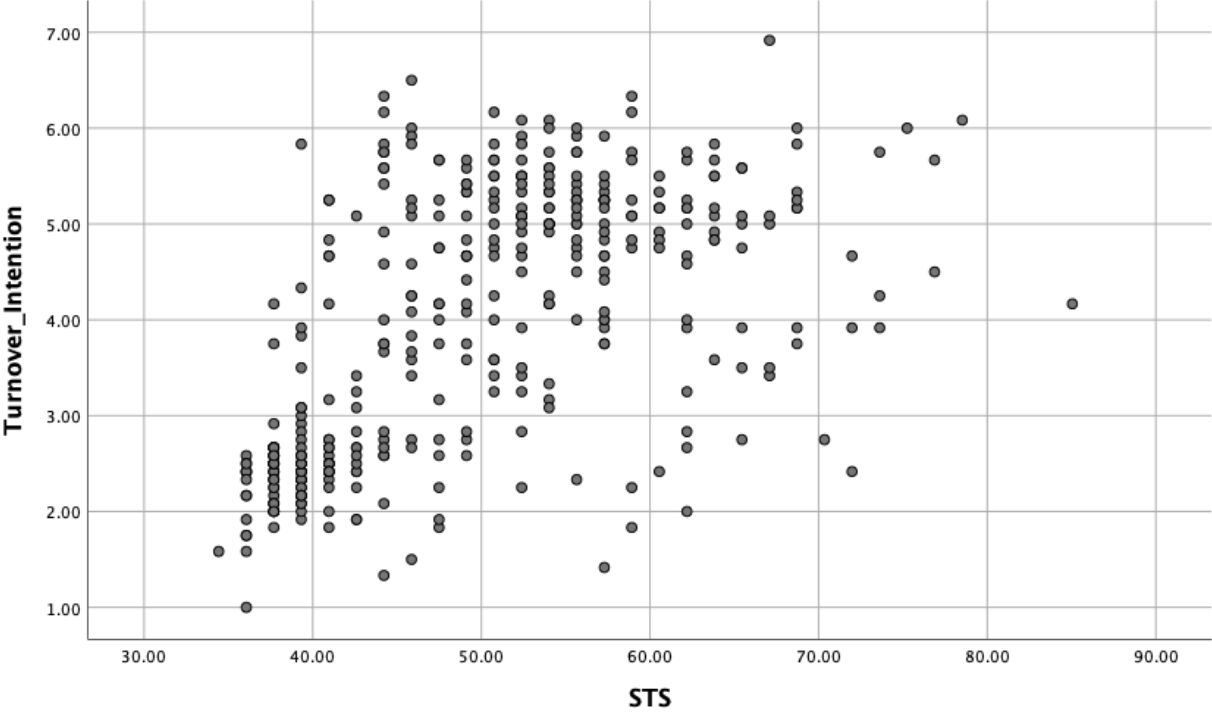


Figure 21

Scatterplot TI to EE

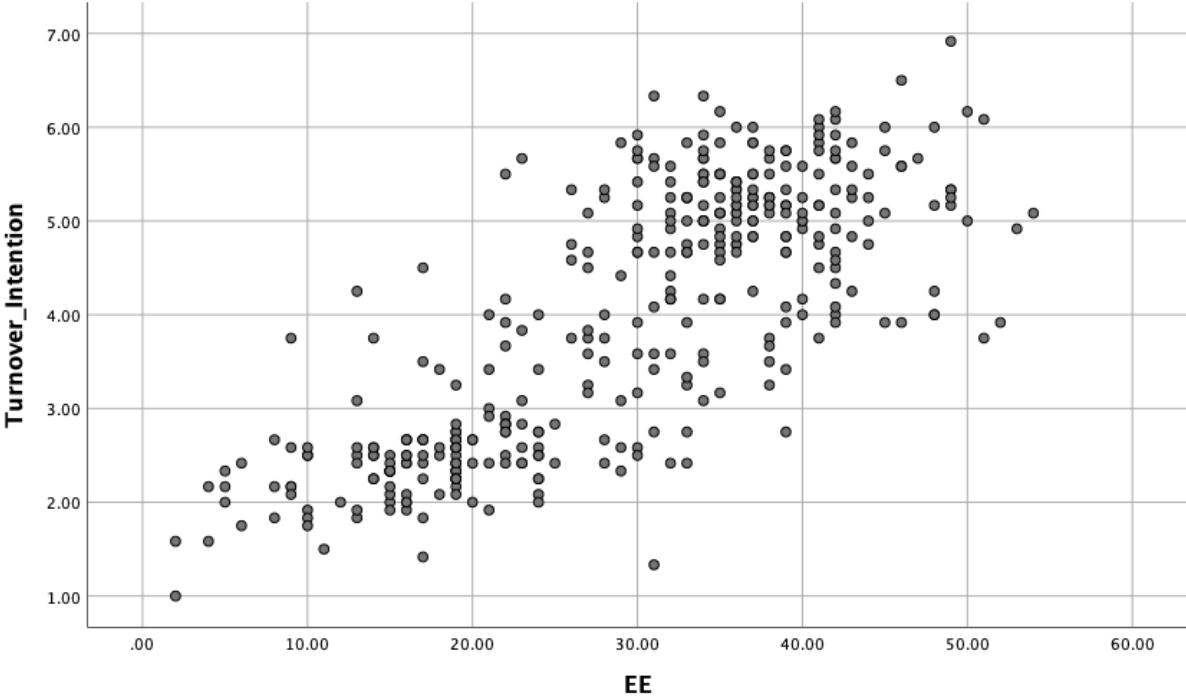
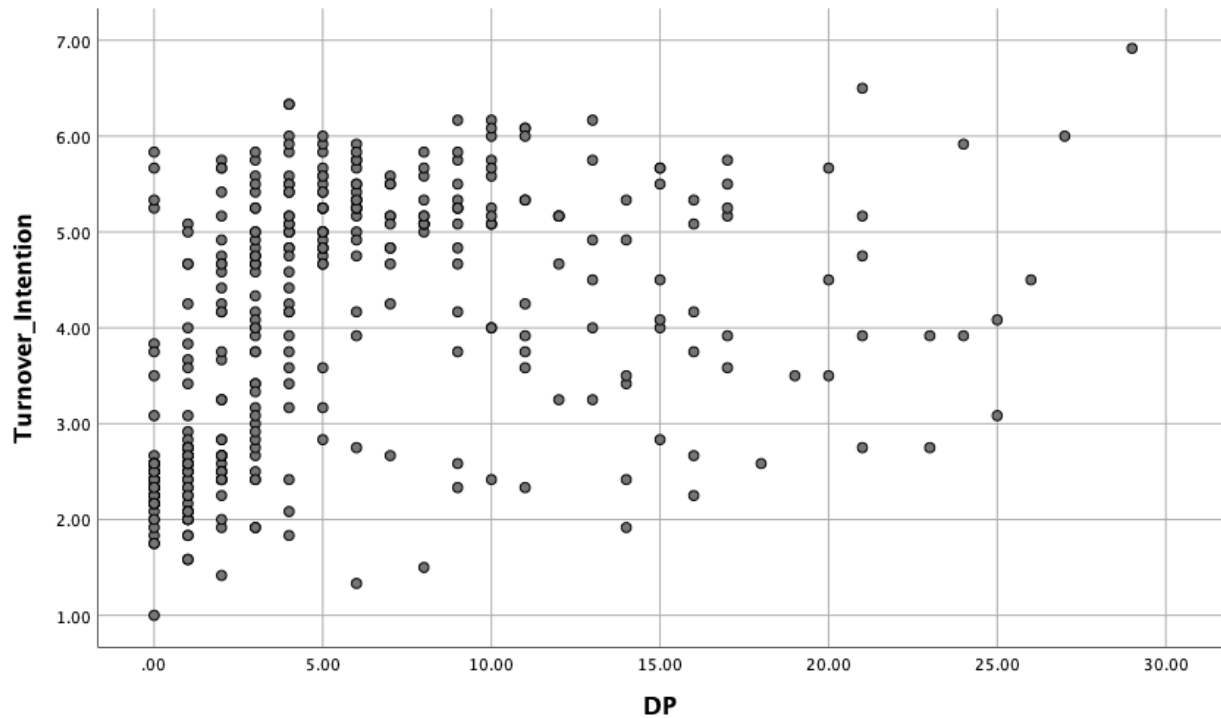


Figure 22*Scatterplot TI to DP****Hypothesis 2***

Research Question 2 asked, “To what extent, if any, is there a relationship between compassion fatigue, burnout, and turnover intention in the trauma center nurses for specific demographics such as age and years of service as a nurse?”

Hypothesis 2 focuses on the moderating effects of age and years of service on the relationship between compassion fatigue and burnout to turnover intention.

H20: There is no statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses for specific demographics such as age and years of service as a nurse.

H2a: There is a statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses for specific demographics such as age and years of service as a nurse.

Pearson's r resulted in a weak to a moderate relationship ($N = 382$) $r = -0.487, 0.181$, with TI, BO, STS, EE, and DP's relationship to age and years of experience, respectively and $p < .01$ against the null hypothesis $H02$ for all variables seen in Table 14. Therefore, the researcher rejected the null hypothesis $H02$: There is no statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses for specific demographics such as age and years of service as a nurse. Particularly a negative relationship for age and a positive relationship for years of experience regarding compassion fatigue, burnout, and turnover intention was discovered.

Table 14*RQ2 Pearson's Correlations*

		Turnover						
		Intention	BO	STS	EE	DP	Age	Experience
Turnover Intention	Pearson Correlation	1	.797**	.571**	.784**	.392**	-	.181**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N	382	382	382	382	382	382	382
BO	Pearson Correlation	.797**	1	.766**	.860**	.576**	-	.168**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.001
	N	382	382	382	382	382	382	382
STS	Pearson Correlation	.571**	.766**	1	.687**	.669**	-	.167**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.001
	N	382	382	382	382	382	382	382
EE	Pearson Correlation	.784**	.860**	.687**	1	.573**	-	.173**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.001
	N	382	382	382	382	382	382	382
DP	Pearson Correlation	.392**	.576**	.669**	.573**	1	-	.055
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.285
	N	382	382	382	382	382	382	382
Age	Pearson Correlation	-.487**	-.552**	-.530**	-.542**	-.478**	1	-.350**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000
	N	382	382	382	382	382	382	382
Experience	Pearson Correlation	.181**	.168**	.167**	.173**	.055	-	1
	Sig. (2-tailed)	.000	.001	.001	.001	.285	.000	
	N	382	382	382	382	382	382	382

** . Correlation is significant at the 0.01 level (2-tailed).

Spearman rho (rs) resulted in a weak to moderate relationship ($N = 382$) $r = -0.476$, 0.232, with TI, BO, STS, EE, and DP's relationship to age and years of experienced, respectively

and $p < .01$ against the null hypothesis H02 for all variables seen in Table 15. Therefore, the researcher again rejected the null hypothesis H02: There is no statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses for specific demographics such as age and years of service as a nurse. Particularly a negative relationship for age and a positive relationship for years of experience was determined. This is also supported by Tables 16-17 where TI shows a marked decrease with age and years of experience.

Table 15*RQ2 Spearman's Correlations*

		TI	BO	STS	EE	DP	Age	Experience
Turnover Intention	Correlation Coefficient	1	.776**	.597**	.757**	.555**	-.476**	.232**
	Sig. (2- tailed)	.	0	0	0	0	0	0
	N	382	382	382	382	382	382	382
BO	Correlation Coefficient	.776**	1	.781**	.854**	.718**	-.552**	.237**
	Sig. (2- tailed)	0	.	0	0	0	0	0
	N	382	382	382	382	382	382	382
STS	Correlation Coefficient	.597**	.781**	1	.719**	.754**	-.549**	.238**
	Sig. (2- tailed)	0	0	.	0	0	0	0
	N	382	382	382	382	382	382	382
Spearman's rho	EE	.757**	.854**	.719**	1	.717**	-.545**	.234**
	Sig. (2- tailed)	0	0	0	.	0	0	0
	N	382	382	382	382	382	382	382
DP	Correlation Coefficient	.555**	.718**	.754**	.717**	1	-.557**	.183**
	Sig. (2- tailed)	0	0	0	0	.	0	0
	N	382	382	382	382	382	382	382
Age	Correlation Coefficient	-.476**	-.552**	-.549**	-.545**	-.557**	1	-.418**
	Sig. (2- tailed)	0	0	0	0	0	.	0
	N	382	382	382	382	382	382	382
Experience	Correlation Coefficient	.232**	.237**	.238**	.234**	.183**	-.418**	1
	Sig. (2- tailed)	0	0	0	0	0	0	.
	N	382	382	382	382	382	382	382

** . Correlation is significant at the 0.01 level (2-tailed).

Table 16*Turnover Intention * Age*

Age	Mean	N	Std. Deviation
18-24	4.8594	48	.92272
25-34	4.5708	126	1.13275
35-44	3.9297	77	1.37104
45-54	3.2014	84	1.30749
55-64	2.9205	43	1.13462
65 or	3.4375	4	.27534

Table 17*Turnover Intention * Experience*

Experience	Mean	N	Std. Deviation
1-5	4.6396	120	1.07694
6-10	4.4570	64	1.24633
11-15	4.2421	42	1.34960
16-20	3.4167	52	1.25809
>20	3.0978	104	1.25694

Hypothesis 3

Research Question 3 asked, “To what extent, if any, is there a relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within compassion fatigue, burnout, and employees’ attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses?” Hypothesis 3 focuses on the Maslach Burnout Inventory Questionnaire's individual items and their relationship to turnover intention.

H30: There is no statistically significant relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within compassion fatigue, burnout, and employees' attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses.

H3a: There is a statistically significant relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within compassion fatigue, burnout, and employees' attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses.

Pearson product-moment bivariate correlation and Spearman rho (r_s) analyses were conducted to evaluate the null hypotheses related to research question one that asked about the significant relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within compassion fatigue, burnout, and employees' attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses. The Maslach Burnout Inventory (MBI) measured the three dimensions of burnout and turnover intention was measured using the Anticipated Turnover Scale (ATS).

Pearson's r resulted in a moderate to a strong relationship ($N = 382$) $r = -.492, .784$, and $.392$ with TI's relationship to PA, EE, and DP, respectively and $p < .01$ against the null hypothesis H03 for all variables seen in Table 18. Therefore, the researcher rejected the null hypothesis H03: There is a statistically significant relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within compassion fatigue, burnout, and employees' attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses.

Particularly, a negative relationship for PA and a positive relationship for EE and DP regarding turnover intention was detected. As PA increases, TI decreases and as EE and DP increase, TI increases.

Table 18

RQ3 Pearson's Correlations

		Turnover Intention	PA	EE	DP
Turnover Intention	Pearson Correlation	1	-.492**	.784**	.392**
	Sig. (2-tailed)		.000	.000	.000
	N	382	382	382	382
PA	Pearson Correlation	-.492**	1	-.617**	-.731**
	Sig. (2-tailed)	.000		.000	.000
	N	382	382	382	382
EE	Pearson Correlation	.784**	-.617**	1	.573**
	Sig. (2-tailed)	.000	.000		.000
	N	382	382	382	382
DP	Pearson Correlation	.392**	-.731**	.573**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	382	382	382	382

** . Correlation is significant at the 0.01 level (2-tailed).

Spearman rho (r_s) resulted in a moderate to a strong relationship ($N = 382$) $r = -.604$, $.757$, and $.555$ with TI's relationship to PA, EE, and DP, respectively and $p < .01$ against the null hypothesis H03 for all variables seen in Table 19. Therefore, the researcher again rejected the null hypothesis H03: There is a statistically significant relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within compassion fatigue, burnout, and employees' attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses. Particularly, a negative relationship for PA and a positive relationship for EE and

DP regarding turnover intention. As PA increases, TI decreases and as EE and DP increase, TI increases.

Table 19

RQ3 Spearman's Correlations

		Turnover Intention				
		PA	EE	DP		
Spearman's rho	TI	Correlation Coefficient	1.000	-.604**	.757**	.555**
		Sig. (2-tailed)	.	.000	.000	.000
		N	382	382	382	382
		<hr/>				
	PA	Correlation Coefficient	-.604**	1.000	-.735**	-.775**
		Sig. (2-tailed)	.000	.	.000	.000
		N	382	382	382	382
		<hr/>				
	EE	Correlation Coefficient	.757**	-.735**	1.000	.717**
		Sig. (2-tailed)	.000	.000	.	.000
		N	382	382	382	382
		<hr/>				
	DP	Correlation Coefficient	.555**	-.775**	.717**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	382	382	382	382
		<hr/>				

** . Correlation is significant at the 0.01 level (2-tailed).

Summary of Hypothesis Testing

This correlational quantitative study aimed to reduce current research gaps and the professional challenges connected to comprehending compassion fatigue, burnout, and turnover in healthcare. The researcher classified compassion fatigue and burnout as the independent variables and turnover intentions as the dependent variable. The first corresponding null hypotheses posited a statistically significant relationship between compassion fatigue, burnout, and turnover intention in trauma center nurses. The researcher examined the null hypothesis applying information from the sample data to determine the correlation. The Pearson's r and

Spearman's r_s both displayed a positive correlation that supports the conclusion that there is an association between compassion fatigue, burnout, and turnover intention.

The second corresponding null hypothesis posited a statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses for specific demographics such as age and years of service as a nurse. The researcher examined the null hypothesis applying information from the sample data to determine the correlation. The Pearson's r and Spearman's r_s both displayed a negative correlation for age and a positive correlation for years of experience that supports the conclusion that there is an association between compassion fatigue, burnout, and turnover intention for age and years of experience.

The third corresponding null hypotheses posited that there is a statistically significant relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within compassion fatigue, burnout, and employees' attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses. The researcher examined the null hypothesis applying information from the sample data to determine the correlation. The Pearson's r and Spearman's r_s both displayed a moderate to a strong relationship with TI's relationship to PA, EE, and DP. Predominantly, a negative relationship for PA and a positive relationship for EE and DP regarding turnover intention. As PA increases, TI decreases and as EE and DP increase, TI increases.

Relationship of the Hypotheses to the Research Questions

The primary research questions were: "To what extent, if any, is there a relationship between compassion fatigue, burnout, and turnover intention in the trauma center nurses?," "To what extent, if any, is there a relationship between compassion fatigue, burnout, and turnover

intention in the trauma center nurses for specific demographics such as age and years of service as a nurse?” and “To what extent, if any, is there a relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within burnout and employees’ attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses?” Compassion fatigue and burnout have been recognized as primary barriers to employee retention and knowledge transfer in healthcare organizations.

Mudallal, Othman, et al. (2017) determined that compassion fatigue and burnout contributed to the loss of morale, low job satisfaction, low productivity, and increased feelings of powerlessness among nurses. Based on the literature, the researcher expected that compassion fatigue and burnout would be positively correlated to turnover intention (Van der Heijden et al., 2019). Results from this research supported previous research that also determined that age, gender, or years of service were significantly associated with the prevalence rates of CS, CF, and burnout (Zhang, Tai, et al., 2018). Additionally, past research predicted that turnover intention in employees would be inversely related to employee engagement (Van der Heijden et al., 2019).

Theoretical Framework

This theoretical framework is integrated using the components of compassion fatigue, burnout, and aspects of turnover intention literature. This study was designed to examine the relationship between compassion fatigue and burnout to turnover intention in nurses employed by trauma centers. Burnout due to compassion fatigue and unfavorable working conditions is a significant motivation why trauma medical personnel in the nation quit their jobs (Munnangi et al., 2019). The tenets of PQL are composed of compassion satisfaction, compassion fatigue, and burnout (Figley, 2001). Compassion satisfaction (CS) is the positive attribute of serving others,

and CF is the negative aspect of helping others. Burnout, which is characterized by emotional and physical exhaustion and inability to cope with traumatic experiences, culminates in a decreased quality of life, organizational commitment, and increased retention intention among the nurses (van Mol et al., 2015). Nurses can gain CS through actions that help revive or restore their desire for caring for patients (Gerard, 2017). These instances reset nurses to their original determination or meaning, offering a vigor to mitigate or alleviate CF and encourages CS (Gerard, 2017).

Constructed around Stamm's Professional Quality of Life Compassion Satisfaction-Compassion Fatigue Model, the researcher assumed that greater CS levels would correlate with reduced turnover intention. The researcher also presumed that greater BO would increase turnover intention, and higher levels of STS would increase turnover intention. These assumptions are supported by Pearson's r and Spearman's r_s scores in Appendix I. Pearson's $r = -.830$ for CS, $.797$ for BO, and $.571$ for STS relating to TI. This confirms the hypothesized inverse relationship with CS and positive relationships with BO and STS. Spearman's $r_s = -.809$ for CS, $.776$ for BO, and $.597$ for STS relating to TI. This also confirms the hypothesized inverse relationship with CS and positive relationships with BO and STS.

Addressing the Problem

The problem to be addressed by this study was the high levels of compassion fatigue and burnout experienced by trauma center nurses employed in the state of Alabama, which resulted in increased turnover and added cost for the organizations. A 2017 survey specified that registered nurse turnover averaged 14.9%, with a yearly hospital financial loss of \$5.13 M - \$7.86 M and 80% of hospitals reporting a registered nurse vacancy rate higher than 5% (Nursing Solutions Inc., 2017). Snavelly (2016) asserted that burnout is linked to a projected 30%-50% of

all new RNs either transferring jobs within nursing or abandoning the profession altogether within the first three years of clinical practice. Data from this research supports Snavely's contention and reveals that nurses with less than five years of experience had higher BO, TI, and STS and lower CS scores (Appendix J). These are significant findings because staff retention is vital as it enhances knowledge transfer in an organization (Van der Heijden et al., 2019). Thus, experiences, skills, and ideas are transferred to new staff, which plays an essential role in promoting healthcare in an organization. These findings can help managers reduce turnover and help minimize the impact of impending nursing shortages affecting healthcare quality in a negative fashion.

Summary of the Findings

Research Question 1

Each of the hypotheses examined directly correlated to one of the three research questions. The research questions assessed the relationship between compassion fatigue, burnout, and turnover intention in the trauma center nurses. There are various fundamental discoveries from this study that are noteworthy to the trauma center nursing and the nursing industry collectively. First, the statistical outcome of research question 1 rejected the null hypothesis H01; therefore, compassion fatigue and burnout were significantly and positively related to turnover intention. The central research question, Research Question 1, considered this relationship directly. This question asks, "To what extent, if any, is there a relationship between compassion fatigue, burnout, and turnover intention in the trauma center nurses?" The variables were statistically significant at $p < .01$. Based on the conclusions, the null hypothesis of "There is no statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses" was rejected and it was determined that there is a statistically

significant positive relationship between compassion fatigue and burnout to turnover intention in trauma center nurses. This is consistent with the findings presented by Borges et al. (2019) that established the relationship between compassion fatigue and high levels of burnout and stress in nurses. Prior research also has shown that nurses who experience compassion fatigue have higher turnover intention levels (Austin et al., 2017; Leiter & Maslach, 2009; Sung et al., 2012; Zhang, Tai, et al., 2018).

Research Question 2

Research Question 2 considers the relationship between compassion fatigue, burnout, and turnover intention for specific demographics. This question asks, “To what extent, if any, is there a relationship between compassion fatigue, burnout, and turnover intention in the trauma center nurses for specific demographics such as age and years of service as a nurse?” The results are consistent with prior research that the demographics of age and years of experience have significant correlations as moderating variables for the relationship between compassion fatigue, burnout, and turnover intention in this study.

Zhang, Tai, et al. (2018) also determined that age, gender, or years of service were significantly associated with the prevalence rates of CS, CF, and burnout. However, higher education was associated with reduced rates of CF and burnout. This finding is also supported by prior research showing a relationship between years of experience and compassion fatigue (Sung et al., 2012). Additional research into the relationship between years of service, age, compassion fatigue, and burnout to turnover intention should be conducted. The data indicates that compassion fatigue, burnout, and turnover intention were more prevalent in the 18-24 age group and nurses with 1-5 years of experience. Compassion fatigue, burnout, and turnover intention decreased with increased years of experience and age.

The logistic Pearson and Spearman models correctly identified a statistically significant relationship between the variables and the demographic variables. The findings led to the rejection of the null hypothesis of “There is no statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses for specific demographics such as age and years of service as a nurse.” For this reason, it was determined that there is a statistically significant relationship between compassion fatigue and burnout to turnover intention in trauma center nurses for the demographics of age and years of service as a nurse.

Research Question 3

Research Question 3 considers the relationship between the three components of the MBI instrument and turnover intention. This question asks, “To what extent, if any, is there a relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within burnout and employees’ attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses?” The researcher rejected the third null hypothesis, as the correlation results suggest there is a statistically significant relationship between the individual items and factors such as personal accomplishment (PA), emotional exhaustion (EE), and depersonalization (DP) within burnout, and employees’ attitudes and perceptions of the probability of terminating their current job (turnover intention) in trauma center nurses. The study’s findings confirm the research conducted by Wang et al. (2020) who found a significant correlation between burnout and turnover intention in primary care providers.

Application to Professional Practice

This research aimed to establish the potential relationship between compassion fatigue, burnout, and turnover intentions in Alabama trauma center nurses. The findings led to the rejection of all three null hypotheses because a statistically significant relationship exists between compassion fatigue, burnout, and turnover intentions. The conclusions could help organizational leaders with the knowledge and data to improve employee retention, the quality of healthcare for patients and reduce the economic challenges experienced by institutions. This study's findings supplement the literature already available regarding the development of compassion fatigue, burnout, and turnover intention in the nursing profession. To further examine the relationship between compassion fatigue and burnout to turnover intention, this research study surveyed registered nurses employed in Alabama trauma centers to determine the relationship between age, years of experience, and the three dimensions of burnout.

The assumption behind improved comprehension of the relationship between demographic factors and burnout is that if practitioners and researchers can better understand who is most predisposed to experience or develop compassion fatigue and burnout, these data can help devise methods to mitigate suffering from the disorders. This research does not aim to proclaim a causative nature between demographic elements and compassion fatigue and burnout, but rather only proposes a relationship or correlation between them. Although compassion fatigue and burnout can distress personnel from various disciplines and multiple demographics, prior studies have suggested tendencies associated with individuals who are predominantly overwhelmed by compassion fatigue and burnout (Denat, 2016).

Improving General Business Practice

The study's significance was to examine the relationships between compassion fatigue,

burnout, and turnover intention in nurses in Alabama trauma centers and to establish the significance of early identification and prevention of these factors. Prior literature discusses the presence of compassion fatigue, burnout, and turnover in numerous nursing specialties and now this study establishes an association between variables to trauma center nursing. This study has discovered conclusions that can examine factors contributing to compassion fatigue, burnout, and turnover intention. The data indicates that compassion fatigue, burnout, and turnover intention were more prevalent in the 18-24 age group and nurses with 1-5 years of experience. This is consistent with other research, and thus, reassures the need to consider methods to help reduce compassion fatigue and burnout in younger nurses. It is recognized that characteristics such as age or experience do not mitigate compassion fatigue and burnout, but reasonably it is probable that coping strategies related with age or experience reduce CF and BO. Additional research into how experienced nurses manage, anxiety, inadequate resources, and workplace dynamics might demonstrate to be more effective than traditional methods can be designed. This can ensure that younger and less experienced nurses understand how to better manage these issues earlier in their careers.

These findings can help managers reduce turnover and help minimize the impact of impending nursing shortages affecting healthcare quality in a negative fashion. These results can also be used to generate dialogues on nurse wellness and self-care through educational programs, training, and supervision. Education could be the most critical and successful method to assist nurses and managers in inhibiting compassion fatigue and burnout (Figley, 2001; Maslach & Jackson, 1981). Academic institutions, continuing education programs, and management may comprise of material on the influence of life events, recent work-related changes including identifying stressors, conversing how employees may be affected and revealing techniques to

manage professional and individual changes and anxiety. This study concluded being at risk for compassion fatigue also puts a nurse at risk for developing burnout. Enhanced work commitment and employee engagement have been positively related to job crafting, which enhanced the professional practice environment (Cheng et al., 2020).

Various studies exist that establish the manifestation of compassion fatigue and burnout among many specialty nursing practices and now this study establishes a relationship of compassion fatigue and burnout to trauma center nurses. Compassion fatigue and burnout are prevalent in many public service professions. Nursing needs to intensify mindfulness in practices related to compassion fatigue and burnout and the enactment of agendas that recognize and address compassion fatigue and burnout. Pehlivan and Güner (2020) asserted that compassion fatigue progresses in phases in which the nurse is not cognizant that compassion fatigue is emerging. Timely identification and preemption of compassion fatigue through self-care outlets, enhancement in occupational settings and offering support mechanisms within the healthcare framework are all phases in reducing and avoiding compassion fatigue and burnout.

Nurses employed by trauma centers encounter considerable on-the-job stress that can result in employee dissatisfaction and emotional exhaustion (Farahbod et al., 2015). The stress is principally a cause of burnout, the prolonged psychological condition of perceived demands from work overshadowing perceived resources in the occupational setting (Stadniuk et al., 2017). Obtaining an improved conception of the extent to which nurses and other healthcare employees are affected by disorders such as burnout and compassion fatigue is critical for the proposal of a positive and uplifting organizational setting. Pehlivan and Güner (2020) contended that nurses displayed higher job satisfaction and more positive work interactions through increased usage of self-efficacy, optimism, resilience and confidence.

Attention should be given to dynamics which relate to a feeling of personal accomplishment since the present sample demonstrated as PA increases, TI increases. This research also determined as EE and DP increase, TI increases. When nurses experience burnout, they are unable to meet the needs of their patients, which results in reduced productivity and feelings of frustration (Galindo et al., 2012). Leaders could assess factors based on the results and provide recommendations for improvement to decrease turnover intentions, improve employee engagement, improve financial health, and bolster employee growth and development.

Based on the findings from the study conducted by Galindo et al. (2012), it was indicated that nurses who are satisfied with their jobs experience low incidences of BO. These nurses were found to have low levels of work stress. Satisfaction was associated with informational support, social support at work, learning opportunities, and progress in the ability to take part in decision-making. Capacities to manage internal and external challenges deriving from occupational stress can help to mitigate the development of burnout in nurses (Chang & Chan, 2015). These conclusions can be used to retain nurses, reduce organizational costs, and positively influence patient care.

Finally, the discussion of compassion fatigue and burnout needs to be familiarized to nursing students in the beginning stages of their academic journey to elevate knowledge of the effects and consequences of compassion fatigue and burnout and present processes to prevent them from emerging. While leaders should remain cognizant of fundamental organizational principles, they must also realize that outdated procedures may not be effective in the future. In multidimensional business environments, leaders are required to adapt their strategies and manage challenges to succeed (Quinn, 2018).

Managers must adjust their styles to get the best performance from their employees to

achieve organizational goals. Establishments must continually reevaluate operational processes and strive to augment them to serve their stakeholders better and remain competitive. This study's results can be used to retain nurses, reduce organizational costs, and positively influence patient care. This research's conclusions are pertinent to refining professional practices by assisting healthcare leaders better comprehend the connection between compassion fatigue, burnout, and turnover intentions. Leaders could assess factors based on the results and provide recommendations for improvement to decrease turnover intentions, improve employee engagement, improve financial health, and bolster employee growth and development.

The researcher would recommend organizations review these results to evaluate what initiatives, if any, it currently has to recognize and address compassion fatigue, burnout, and turnover intention in its employees. These initiatives, when acknowledged, should be continued for the conceivable future and hard-wired into organizational culture. Specifically, systems need to be developed, such as training and accountability, for supervisors to be consistently invested.

Potential Application Strategies

The purpose of this quantitative, correlational study was to evaluate the relationship between compassion fatigue, burnout, and turnover intention for trauma center nurses. The study findings designate that compassion fatigue precedes burnout among trauma nurses and consequently increases turnover intention. As such, this sub-section shall include recommendations and steps to implement them. It will also identify the stakeholders affected by the findings presented here, recommendations proposed, and the strategies to implement them. Lastly, it shall outline ways to share the academic and nursing communities' findings to support research-based interventions within trauma care settings.

The study findings highlighted a clear relationship between compassion fatigue, burnout, and turnover intention among trauma nurses. In-depth analyses revealed certain factors contributed to the prevalence of compassion fatigue and burnout among trauma nurses, fueling turnover intention. Healthcare facility administrators who oversee trauma centers can use the results to develop effective measures that mitigate the situation by undermining the effects of compassion fatigue and burnout among trauma center nursing staff. Emphasis should be placed on training nursing leaders to recognize and address compassion fatigue and burnout among trauma center nurses. Other potential effective measures include implementing effective research-based support programs, developing shared governance programs that give trauma nurses a voice in scheduling, hospital policies, and workflows, ensuring adequate nursing staff levels are maintained, and supporting acuity-based staffing tools help improve nurse-to-patient ratios.

Training Nurse Leaders

Essentially, training nurse leaders to recognize and address burnout among trauma center nurses involve training them to develop enhanced interpersonal relationships rather than exercise professional boundaries exclusively in their interactions within the workplace environment. Accordingly, the nurse leaders that require further training the most are preceptors. In this case, preceptors are professional nurses assigned to provide mentorship and training to other nurses, often new ones, because of their professionalism and history of effective healthcare delivery (Mudallal, Salah, et al., 2017). Their role is to help nurses transition effectively from learning about nursing to implementing nursing principles in delivering quality healthcare to dynamic patient populations (Lee, 2019). The relationship between nurses and preceptors is a vital tool

through which experienced nurses can recognize and address burnout among trauma nurses by enhancing interpersonal relationships.

Experienced nurses with the capacity to be effective preceptors are decreasing due to the perceived diminished effectiveness of being a preceptor, especially in settings with high turnover rates, such as trauma care settings (Maslach & Leiter, 2017). Due to the rotational assignment of duties, preceptor-nurse relationships deteriorate such that the nurse leaders fail to identify burnout symptoms among trauma nurses in need (Lee, 2019). Consequently, training preceptors expanding their role from exclusively working with new nurses to include all nurses within a department would significantly help recognize and address burnout among trauma nurses by establishing interdependent relationships.

Implementing Effective Research-Based Support Programs

The dynamic situations that nurses face/encounter are at the heart of compassion fatigue prevalence (Jacobs et al., 2016). Among trauma nurses, developing effective research-based support programs involves addressing burnout's core features: emotional and physical exhaustion, lack of personal fulfillment, moral distress, depersonalization, and professional dissatisfaction (Liu et al., 2018). Concerning emotional exhaustion, it causes physical and mental fatigue (Khoo et al., 2017). Effective support programs such as sports events would reduce emotional exhaustion by providing constructive avenues through which trauma nurses can vent their emotional frustration through physical exercise. Research shows that physical exercise improves mood, lowers stress, and sharpens the mind (Kvam et al., 2016; Wolf, 2016).

Personal fulfillment and professional dissatisfaction, career development programs, and avenues represent effective support programs for trauma nurses keen on advancing their careers through lifelong learning (Mudallal, Salah, et al., 2017). Conversely, moral distress and

depersonalization caused by compassion fatigue can be addressed through group support programs in which trauma nurses would share their negative feelings and experiences with peers in order to recognize similar experience in them that highlight compassion fatigue as a consequential outcome within trauma care settings (Lee, 2019). Therefore, group counseling could be a helpful support program to help trauma nurses manage the effects of compassion fatigue, thereby undermining the development of burnout syndrome among them.

Developing Shared Governance Programs

Despite the critical role nurses play in the healthcare system, nursing remains the most exhausting healthcare field with some of the lowest compensation returns, representation in hospital administrations, and opportunities for socio-economic development and advancement (Ong, 2017). Part of the nursing hardships is that nurses do not share in many decision-making processes that develop policies that affect them the most. Within and outside healthcare facilities, nurses often lack administrative support to enhance their workplace experiences by establishing more effective work-life balances (Ong, 2017). Resultantly, the development of shared governance programs that ensure nursing staff are involved in governance processes or represented by nursing officials is critical.

For instance, research shows that burnout prevalence has been increased over the past 20 years due to the universal adoption of the cost-effective measure that involves implementing longer working hours with increasingly small nursing staff to manage the workforces and reduce the overall cost of delivering quality healthcare (Gutsan et al., 2018). As such, shared governance programs will ensure that trauma nurses have access to resources that help them manage the effects of compassion fatigue and prevent the development of institutional policies that affect them adversely.

Ensuring Adequate Nursing Staff Levels

Generally, the internationally recommended nurse-to-patient ratios are 1:6 in medical-surgical and behavioral units, 1:4 in telemetry, intermediate care, step-down, and non-critical emergency units, 1:2 in intensive care, trauma, and post-anesthesia units, and 1:1 for patients under anesthesia (Gutsan et al., 2018). Unfortunately, trauma nurses often attend to more than two patients due to understaffing and the rotational scheduling system that forces trauma nurses to attend to multiple patients simultaneously.

Moreover, ensuring adequate nursing staff levels also involves developing institutional measures and policies that undermine turnover rates. In general, nursing staff turnover rose from 16.4% to 17.2% between 2016 and 2017 (Wei et al., 2017). This represents a 0.9% increase in nursing staff turnover in 12 months. Assuming the trend remains persistent, the healthcare sector is looking at a potential increase in nursing staff turnover at 1% per annum. Combined with the already existing nursing staff shortage in the industry, ensuring adequate nursing staff levels is critical for healthcare administrations with trauma care settings. Since the administrations argue that cost-effective measures are the reason for understaffing, the same argument should be used to justify the exact opposite. For instance, the average cost of nursing turnover among registered nurses ranges from \$37,700 to \$58,400 (Gutsan et al., 2018).

Supporting Acuity-Based Staffing Tools

Supporting acuity-based staffing tools should be proposed as a means of enhancing the quality of healthcare patients receive by undermining the effects compassion fatigue and burnout have on the quality of care nursing staff provide (Pradas-Hernandez et al., 2018). Burnout reduces the quality of provided care, causing more hospital-acquired infections (Pradas-Hernandez et al., 2018). Also, a reduction in care quality will lead to higher patient death

(Shenoi, 2018). Therefore, acuity-based staffing tools such as electronic health information databases would help trauma nurses learn patient health histories when providing trauma care.

Summary

Compassion fatigue and burnout are significantly connected to nurse turnover intention. The research determined that STS, BO, and turnover intention are positively correlated. Turnover affects organizations financially and influences healthcare delivery. Because operational settings are causative dynamics in CF and BO's maturity, it is fundamental that organizations be preemptive and devise strategies to supply nurses with sufficient resources. Institutions must emphasize identifying the elements responsible for causing CF and BO. Consequently, more interdisciplinary research is necessary to discover other causative influences on CF and turnover intention and efficient methods to diminish CF and BO.

Recommendations for Further Study

This quantitative correlational study underscores the relationship between compassion fatigue, burnout, and turnover intention in trauma center nurses, with the opportunity to add to the expanding body of knowledge paralleling employee engagement, healthcare resource management, and healthcare quality and safety. There are significant opportunities to aid with academic research providing professional support to generate organizational change strategies to improve operations. This study indicated a correlation between compassion fatigue and turnover intention, signaling supplementary research is essential to establish the presence and strength of this relationship for the nursing profession as a whole.

Because nursing burnout and compassion fatigue have been identified as the primary causes of highly qualified nurses leaving the profession, further research is needed to evaluate the magnitude of burnout among nurses, find the elements that cause it, discover the factors that

alleviate it, and evaluate ways of reducing it. Although the study findings satisfied the presented research questions, additional areas for the study were also recognized. The subsequent section will review the areas that need a closer examination to add to the body of knowledge on compassion fatigue, burnout, and turnover intention in nurses.

This study was conducted using participants that are employed by trauma centers in the state of Alabama. For this reason, it might be difficult to generalize these results to registered nurses who do not work in a trauma center or those located in other regions of the United States. Consequently, opportunities for further examination of the relationship between compassion fatigue and burnout to turnover intention retention might include increasing the geographic scope by utilizing research sites in various portions of the United States. Additionally, future research could include using a research site that is government-run or non-profit, an academic medical center, or a faith-based hospital. Finally, different shifts should be considered and compared. Nurses work morning, evening, and night shifts. Comparing how work shifts impact compassion fatigue and burnout could help leadership identify the advantages and disadvantages of being a nurse in a trauma center.

Demographics could also be scrutinized further in another analysis. The sample population for this study contained only 40 males. Although this is demonstrative of the general population, this decreased quantity makes it challenging to establish the validity of the results regarding gender. For this motivation, further investigation could be performed with an increased contributor pool to conclude if the gender demographic variable is a significant controlling factor in a larger sample. Also, due to the intrinsic variable-centric nature of this study and anonymous contributor technique, future opportunities centering research on an individual organization or approaching the study through a qualitative perspective. A qualitative method could be utilized

to examine further the factors of compassion fatigue, burnout, and turnover intention that were statistically significant. Future researchers can conduct interviews with nurses to explore the experiences and meanings that cause nurses to develop compassion fatigue and burnout and eventually wish to leave their organizations.

Reflections

This research project developed from the researcher's experience working in a trauma center and observations of nursing professionals' experiences from various departments within the organization. Observations led the researcher to question what specific characteristics resulted in a professional's capacity to flourish in the healthcare environment for an extended period, while some colleagues exited the profession in less than three years. The researcher was compelled to question whether educational background, demographics, or service years led to these differences.

Personal and Professional Growth

When it came time to select a research topic, the researcher could not turn down the opportunity to add to the literature on burnout, which results in loss of productivity in healthcare, turnover, and financial loss. Numerous conversations with colleagues and peers about their battles with burnout educated the researcher on the condition and sparked a desire to become a healthcare leader. This resulted in pursuing a doctoral degree to acquire new knowledge and skills that will allow the investigator to take on new responsibilities and become a change agent. This will also permit the researcher to stay abreast of new trends and developments in healthcare, combining theoretical knowledge with practical skills and add value to any organization. The researcher envisioned to deliver data for healthcare leaders who aspire to increase retention and improve employee engagement by generating this analysis.

The study's outcomes validated many assumptions the researcher had about burnout, and some results were not anticipated. Researchers have an ethical responsibility to disclose the limitations of studies and outline possible origins of prejudices and biases. This researcher utilized volunteers who completed an anonymous survey. When examining the responses, the researcher made efforts to avoid any biases during analysis. The researcher did not search for data that confirmed the study's hypotheses or personal experience.

When this research project began, the researcher believed more nurses would exhibit high levels of burnout. The overall population did not exhibit high burnout. Initial opinions relating to the correlation between age and burnout were conflicted. The researcher believed that older nurses would have higher burnout levels because they have been in the profession for a more extended period. However, the results were the contrary. Nurses with less than five years of experience were the group experiencing burnout the most. The researcher does not believe his view on the matter resulted in any bias or effect on the research's validity. The current pandemic has generated an environment that introduces added tensions and reductions in productivity. Leaders and managers now have to choose efficiency over education and training. Mentorship and personal relationships between new hires and management are vital to helping younger nurses become comfortable in stressful healthcare settings.

Biblical Perspective

This research has insightful Biblical implications for the healthcare setting. Healthcare organizations provide valued services to their communities, but they cannot continue to disregard the mental, physical, and emotional well-being of their personnel for the sake of profitability and efficiency. According to Jeff Van Duzer, God-given purpose suggests that the concept of management and productivity is an unusual process between employees that aspires to position

individuals in such environments where they can cooperate and find shared solutions (Van Duzer, 2010). The integration of employee engagement and human resource practices leads to the fulfillment of various goals, resulting in extraordinary organizational performance. “Just as a body, though one, has many parts, but all its many parts form one body, so it is with Christ. For we were all baptized by[a] one Spirit so as to form one body—whether Jews or Gentiles, slave or free—and we were all given the one Spirit to drink” 1 Corinthians 12:12-13 (NIV). While leaders should regard and continue to be mindful of central organizational philosophies, they must understand that outdated processes may not be effective in the future.

Connecting mission, values, and vision supplement the strategic-planning evolution and strengthen the prospect of performance improvement. In healthcare, lack of effective teams could lead to poor patient outcomes, increased staff turnover, and increased operational costs (Green et al., 2017). Consequently, providers must work in concert to formulate effective communication that guides healthcare to a new standardization level. This approach can help reduce the length of stay, improve patient outcomes, reduce costs, and improve care coordination. Thus, healthcare teams work together to share expertise make informed decisions, develop care plans, and provide quality and safe care for all patients. Healthcare providers are anticipated to not only do the best that they can with what they have, but they are to do their best for the Lord. The Bible states in Colossians 3:23 (KJV) “And whatsoever ye do, do it heartily, as to the Lord, and not unto men.”

Organizations must use resourcefulness and innovation to ensure they are keeping employees engaged. This includes establishing relationships and comprehending what motivates them to want to perform their duties at a high level and encourages commitment. There must be an aggregation of strategy, development of expressive relationships, leadership development, and display of empathy. “Woe to him who builds his house by unrighteousness, and his upper rooms

by injustice, who makes his neighbor serve him for nothing and does not give him his wages” Jeremiah 22:13 (ESV). Also, healthcare organizations should motivate nurses to enhance job satisfaction to reduce burnout and increase productivity. When feeling stressed and experiencing compassion fatigue and burnout, nurses should keep (James 1:12) in mind, “Blessed is the man who remains steadfast under trial, for when he has stood the test he will receive the crown of life, which God has promised to those who love him.” Financial gain should be not the fundamental goal for organizations and employees but only a means to achieve that goal. People's business determination is to generate prosperity in societies and circumstances for creative and substantial work and preserve peace and love between employees and their clients (Van Duzer, 2010). In advancing God's commitment, people should fulfill all these conditions, which are consequences of effective management and efficiency.

In modern times many approaches are used to plan organizations' strategies to make predictions and evaluate trends to remain competitive. During a global pandemic where uncertainty exists and stress increases, employees' deeper commitment must be sought, so fewer leave, absenteeism declines, and productivity increases. Van Duzer 2010 contends that employees and management should aim to abide by the biblical framework to develop and comprehend the importance of their functions in accomplishing God's plan. The biblical framework helps an organization deliver support to the employees to accomplish personal and professional growth. Consequently, they are likely to develop higher job satisfaction and subsequently reduced turnover intentions. The organization thus reduces the costs associated with employee turnover including those of rehiring.

Summary of Section 3

In Section 3, the researcher included a succinct overview of the study and a presentation of the findings containing instrument data, analysis, conclusions, and evidence related to the study's research questions and hypotheses. Additionally, this section examined applications to the professional practice of business and recommendations for action and further study. Finally, Section 3 closed with reflections from the researcher and a summary and study conclusion.

Summary and Study Conclusions

Registered nurses are significant participants in our healthcare delivery system and have exhibited high levels of compassion fatigue and burnout. Compassion fatigue and burnout in nurses at trauma centers can negatively impact patient care. Trauma centers are confronted with unique community, economic, and resource challenges that can conceivably make the work environment stressful. Moreover, employee turnover is a concern for the healthcare industry because employees with turnover intentions may exhibit decreased commitment and elevated distrust towards the organization, affecting organizational revenues.

This study tested the theoretical framework developed by Stamm (2009) and Figley (2001) to determine whether a relationship exists between compassion fatigue and burnout to turnover intention in nurses employed by Alabama trauma centers. The researcher combined three instruments into one survey. The MBI-HSS, developed by Maslach et al. (1996), the Professional Quality of Life Scale (ProQOL; Stamm 2009) and the Anticipated Turnover Scale (ATS; 1984) was used to measure compassion fatigue and burnout to turnover intention in Alabama trauma center nurses. Participants were asked to self-report select demographic information and complete the combined survey to determine their level of compassion fatigue, burnout, and turnover intention.

Using correlation models, the researcher concluded the relationship between compassion fatigue and burnout to turnover intention was statistically significant. Additionally, a model using age and years of experience to predict the level of compassion fatigue, burnout, and turnover intention was reliable and generalizable to the population. The conclusions from this study contribute to the increasing body of literature on burnout in the nursing vocation. Recommendations for further research include investigating burnout in healthcare institutions of various sizes and geographic locations, selecting a research site that is government-run or non-profit, an academic medical center, or faith-based hospital, comparing data among shifts, as well as consideration of additional demographic factors in order better to predict compassion fatigue, burnout, and turnover intention.

Conclusively, and most essentially, the study was a success because the results of this research reduce literature gap regarding compassion fatigue, burnout, and turnover intention in trauma center nurses. It is fundamental researchers and leaders continue to achieve an enhanced comprehension of the concerns to research and recommend solutions to moderate compassion fatigue, burnout, and turnover intention in the nursing profession. Decreasing these variables' manifestation can lower operational costs and turnover and help organizations better obey God's purposes for human interaction and work.

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Appendix A: IRB Approval**LIBERTY UNIVERSITY**
INSTITUTIONAL REVIEW BOARD

September 25, 2020

Wendell Waters
Lynn Brown-Bulloch

Re: IRB Exemption - IRB-FY20-21-43 A Quantitative Study of Relationships Between Compassion Fatigue and Burnout to Turnover Intention in Alabama Trauma Center Nurses

Dear Wendell Waters, Lynn Brown-Bulloch:

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46: 101(b):

Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Your stamped consent form can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. This form should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office

Appendix B: Participant Consent Form

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, please exit the survey and close your internet browser. Your responses will not be recorded or included in the study.

Contacts and Questions: The researcher conducting this study is Wendell Waters. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at [REDACTED]. You may also contact the researcher's faculty chair, Dr. Lynn Brown-Bulloch, at [REDACTED].

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Appendix C: Screening and Demographics Questions

1. Are you a registered nurse that is currently employed full time by a trauma center in Alabama?

- A. Yes
- B. No

If you are unsure, please check for your institution on the following link:

<https://www.alabamapublichealth.gov/aths/trauma-center-levels.html>

2. Do you have at least 1 year of experience working full time as a registered nurse in an Alabama trauma center?

- A. Yes
- B. No

Demographic Survey

1. How old are you?

- A. 18-24
- B. 25-34
- C. 35-44
- D. 45-54
- E. 55-64

- F. 65 or older

2. Which gender do you identify as most?

- A. Male

B. Female

3. Which racial or ethnic background do you identify with most? (Note: categories are defined by the federal government).

- A. African-American (non-Hispanic)
- B. Asian/Pacific Islanders
- C. Caucasian (non-Hispanic)
- D. Latino or Hispanic
- E. Native American, Aleut or Aboriginal Peoples
- F. Other
- G. Prefer not to answer

4. What is your marital status?

- A. Single
- B. Married
- C. Divorced, or widowed
- E. Prefer not to answer

5. What is your highest level of education completed?

- A. Associate's degree
- B. Bachelor's degree
- C. Master's degree
- D. Doctoral or Professional degree (J.D., Pharm D., etc.)

6. How many years of experience do you have as a nurse?

- A. 1-5
- B. 6-10
- C. 11-15

D. 16-20

E. More than 20

7. How many beds does your organization have?

A. 1-200

B. More than 200

8. Approximately how many hours do you work each week?

A. 30-40

B. 41-50

C. 51-60

D. 61-70

E. More than 70

Appendix D: Permission to use the Maslach Burnout Inventory

Contents of the Maslach Burnout Inventory are copyrighted and not open for public distribution.

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Permission for WENDELL WATERS to reproduce 382 copies within three years of November 21, 2020

Maslach Burnout Inventory™

Instruments and Scoring Keys

Includes MBI Forms:

**Human Services - MBI-HSS Medical Personnel - MBI-HSS (MP)
Educators - MBI-ES General - MBI-GS Students - MBI-GS (S)**

Christina Maslach Susan E. Jackson Michael P. Leiter Wilmar B. Schaufeli Richard L. Schwab

Published by Mind Garden, Inc.

info@mindgarden.com www.mindgarden.com

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Appendix E: MBI Scoring Key

Scoring & Interpretation Key – MBI-HSS

Instructions. For each column, transfer your response (0-6) from the original measure to the three columns below. Only transfer numbers to the unshaded/ungreyed spaces. Then, sum each column and place that number in the space provide below. This number represents your score for that dimension. Guidelines for interpretation can be found on the right side of the sheet.

Emotional Exhaustion Depersonalization Professional Accomplishment

How Often 0-6	How Often 0-6	How Often 0-6
1. _____	1. _____	1. _____
2. _____	2. _____	2. _____
3. _____	3. _____	3. _____
4. _____	4. _____	4. _____
5. _____	5. _____	5. _____
6. _____	6. _____	6. _____
7. _____	7. _____	7. _____
8. _____	8. _____	8. _____
9. _____	9. _____	9. _____
10. _____	10. _____	10. _____
11. _____	11. _____	11. _____
12. _____	12. _____	12. _____
13. _____	13. _____	13. _____
14. _____	14. _____	14. _____
15. _____	15. _____	15. _____
16. _____	16. _____	16. _____
17. _____	17. _____	17. _____
18. _____	18. _____	18. _____
19. _____	19. _____	19. _____
20. _____	20. _____	20. _____
21. _____	21. _____	21. _____
22. _____	22. _____	22. _____

Categorization: Emotional Exhaustion, Human Services & Educators Forms	
Frequency	
High	27 or over
Moderate	17-26
Low	0-16

Categorization: Depersonalization, Human Services Form	
Frequency	
High	13 or over
Moderate	7-12
Low	0-6

Categorization: Personal Accomplishment,* Human Services Form	
Frequency	
High	39 or over
Moderate	32-38
Low	0 - 31

EE Sum _____ Dep Sum _____ PA Sum _____

MBI-General Survey: Copyright ©1996, 2016 Wilmar B. Schaufeli, Michael P. Leiter, Christina Maslach & Susan E. Jackson.
 MBI-Human Services Survey: Copyright ©1981 Christina Maslach & Susan E. Jackson.
 MBI-Educators Survey: Copyright ©1986 Christina Maslach, Susan E. Jackson & Richard L. Schwab.
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Appendix F: PROQOL Scoring Key

WHAT IS MY SCORE AND WHAT DOES IT MEAN?

In this section, you will score your test so you understand the interpretation for you. To find your score on **each section**, total the questions listed on the left and then find your score in the table on the right of the section.

Compassion Satisfaction Scale

Copy your rating on each of these questions on to this table and add them up. When you have added then up you can find your score on the table to the right.

- 3. _____
- 6. _____
- 12. _____
- 16. _____
- 18. _____
- 20. _____
- 22. _____
- 24. _____
- 27. _____
- 30. _____

Total: _____

The sum of my Compassion Satisfaction questions is	And my Compassion Satisfaction level is
22 or less	Low
Between 23 and 41	Moderate
42 or more	High

Burnout Scale

On the burnout scale you will need to take an extra step. Starred items are "reverse scored." If you scored the item 1, write a 5 beside it. The reason we ask you to reverse the scores is because scientifically the measure works better when these questions are asked in a positive way though they can tell us more about their negative form. For example, question 1. "I am happy" tells us more about

- *1. _____ = _____
- *4. _____ = _____
- 8. _____
- 10. _____
- *15. _____ = _____
- *17. _____ = _____
- 19. _____
- 21. _____
- 26. _____
- *29. _____ = _____

Total: _____

The sum of my Burnout Questions is	And my Burnout level is
22 or less	Low
Between 23 and 41	Moderate
42 or more	High

You Wrote	Change to
	5
2	4
3	3
4	2
5	1

the effects of helping when you are *not* happy so you reverse the score

Secondary Traumatic Stress Scale

Just like you did on Compassion Satisfaction, copy your rating on each of these questions on to this table and add them up. When you have added then up you can find your score on the table to the right.

- 2. _____
- 5. _____
- 7. _____
- 9. _____
- 11. _____
- 13. _____
- 14. _____
- 23. _____
- 25. _____
- 28. _____

Total: _____

The sum of my Secondary Trauma questions is	And my Secondary Traumatic Stress level is
22 or less	Low
Between 23 and 41	Moderate
42 or more	High

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Appendix G: Permission to Use The Anticipated Turnover Scale

From: "Waters, Wendell" <[REDACTED]>
To: "xxxx"
Date: 07/21/2020 3:53 AM
Subject: Permission request to use anticipated turnover scale

Dear Dr. Atwood,

I hope all is well. I am emailing you regarding the Anticipated Turnover Scale (ATS). My name is Wendell, and I am a doctoral candidate at Liberty University. My dissertation on compassion fatigue and burnout includes part of nurses' intent to leave their organization and I am interested in using your questionnaire. Therefore, I am requesting your permission to use your survey in my proposed study. Thank you in advance. Stay safe and have a great day!

Best regards,

Wendell Waters "Waters, Wendell" <[REDACTED]>
Doctoral candidate
Liberty University
School of Business

JAN ATWOOD <xxxxxxxxxxxx>
Fri 7/24/2020 4:49 PM
To: Waters, Wendell

Dear Doctoral Candidate Waters (Liberty University):

Thank you for your email regarding information about instruments in the Anticipated Turnover Among Nursing Staff study (#R01 NU00908). Dr. Hinshaw and I are happy to provide the ATS tool for your review and use, if deemed appropriate in your research. Attached please find the tool, the scoring key, copyright information, validity and reliability with our samples, copyright citation to use when modifying, citing, or using a scale in any way and some references. Since our work was done some time ago, we recommend re-estimating validity and reliability before use. In that regard, these two references may be of interest: 1. Henley, Susan J. (March-April 2015). Editorial: Reliability Concepts and Methods. Special Focus Section. Nursing Research. 64:79-80 plus relevant articles in that issue about current methods of designing and conducting reliability analyses, (www.nursingresearchonline.com),2. Liu, Wen; Unick, Jay; Galik, Elizabeth; and Resnick, Barbara. (March-April) 2015. Barthel Index of Activities of Daily Living. Item Response Theory Analysis of Ratings for Long-Term Care Residents. Nursing Research. 64:2:88-89. (www.nursingresearchonline.com) (example of the analysis technique), and 3. Brzyski, Pjotr; Kozka, Maria; Squires, Allison; and Brzostek, Tomasz (2016). How factor analysis results may change due to country context. International Journal of Nursing Scholarship. (48:6:598-607).

The next email also contains the same file plus the theoretical/conceptual model we used for our work. The model is explicated in the Nursing Research article noted in the reference list, where the ATS instrument was first reported. The model shows concepts we used successfully to predict anticipated turnover. The instruments we used include: Nursing Job Satisfaction, Work Satisfaction, Job Stress, Group Cohesion, Autonomy (quality of employment, job characteristics subscales) and Group Cohesion Scales. Some of these scales are ours and some by other authors.

This email constitutes the letter of permission to use the ATS.

All the best with your work on compassion fatigue and burnout includes part of nurses' intent to leave their organization.

Sincerely,

Jan R. Atwood, PhD, Nurse Scientist, FAAN
Professor Emerita, Colleges of Nursing & Public Health

Appendix H: Recoding For SPSS

Composite Variable	Source	Value Range	Category	Type	Action/ Role
Age (range)	Demographic Survey Question	1=18-24 2= 25-34 3= 35-44 4= 45-54 5= 55-64 6= >65	Interval	Independent	Covariate
Gender	Demographic Survey Question	1= Female 2= Male	Nominal	Independent	Covariate
Education	Demographic Survey Question	1= Associate's 2= Bachelor's 3= Doctorate 4= Master's	Nominal	Independent	Covariate
Years of experience	Demographic Survey Question	1=1-5 2= 6-10 3= 11-15 4= 16-20 5= >20	Interval	Independent	Covariate

Appendix I: TI, BO, STS, CS Correlation*TI, CS, BO, STS Pearson's Correlations*

		Turnover Intention	CS	BO	STS
Turnover Intention	Pearson Correlation	1	-.830**	.797**	.571**
	Sig. (2-tailed)		.000	.000	.000
	N	382	382	382	382
CS	Pearson Correlation	-.830**	1	-.871**	-.642**
	Sig. (2-tailed)	.000		.000	.000
	N	382	382	382	382
BO	Pearson Correlation	.797**	-.871**	1	.766**
	Sig. (2-tailed)	.000	.000		.000
	N	382	382	382	382
STS	Pearson Correlation	.571**	-.642**	.766**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	382	382	382	382

** . Correlation is significant at the 0.01 level (2-tailed).

TI, CS, BO, STS Spearman's Correlations

		Turnover				
		Intention	CS	BO	STS	
Spearman's rho	Turnover Intention	Correlation Coefficient	1.000	-.809**	.776**	.597**
		Sig. (2-tailed)	.	.000	.000	.000
		N	382	382	382	382
		<hr/>				
	CS	Correlation Coefficient	-.809**	1.000	-.863**	-.670**
		Sig. (2-tailed)	.000	.	.000	.000
		N	382	382	382	382
		<hr/>				
	BO	Correlation Coefficient	.776**	-.863**	1.000	.781**
		Sig. (2-tailed)	.000	.000	.	.000
		N	382	382	382	382
		<hr/>				
STS	Correlation Coefficient	.597**	-.670**	.781**	1.000	
	Sig. (2-tailed)	.000	.000	.000	.	
	N	382	382	382	382	
	<hr/>					

** . Correlation is significant at the 0.01 level (2-tailed).

Appendix J: Survey Means*Mean Report*

Experience		BO	TI	CS	STS	EE	DP	PA
1-5	Mean	55.5744	4.6396	45.0574	55.8990	35.8417	9.5500	36.6417
	N	120	120	120	120	120	120	120
	Std. Deviation	7.92210	1.07694	7.70658	8.93895	9.06002	6.51417	5.69947
6-10	Mean	52.8539	4.4570	46.1870	53.2295	32.2031	5.6563	39.8750
	N	64	64	64	64	64	64	64
	Std. Deviation	9.26691	1.24633	8.87270	9.61556	8.99061	4.98957	5.46998
11-15	Mean	52.7950	4.2421	47.4729	50.5995	31.8333	5.7143	40.5238
	N	42	42	42	42	42	42	42
	Std. Deviation	10.15729	1.34960	10.21128	9.48675	10.07270	5.02814	4.79958
16-20	Mean	45.5090	3.4167	54.4385	45.8238	25.2885	3.7885	42.8077
	N	52	52	52	52	52	52	52
	Std. Deviation	9.06333	1.25809	8.78850	8.49198	11.45209	5.17663	3.35506
>20	Mean	43.0159	3.0978	56.7818	43.1548	21.2404	2.1058	43.8173
	N	104	104	104	104	104	104	104
	Std. Deviation	7.70397	1.25694	8.79626	6.78805	9.36995	2.58794	3.02021

Appendix K: Permission to Use PROQOL Survey

ProQOL Office [REDACTED] >
Tue 9/8/2020 12:12 AM

Thank you for your interest in the ProQOL.

The ProQOL measure may be freely copied and used, without individualized permission from the ProQOL office, as long as:

- (a) You credit The Center for Victims of Torture and provide a link to www.ProQOL.org.
- (b) It is not sold; and
- (c) No changes are made, other than creating or using a translation, and/or replacing "[helper]" with a more specific term such as "nurse."

Because you have agreed that your use of the ProQOL follows the above criteria, the ProQOL Office at the Center for Victims of Torture grants you permission to use the ProQOL. Your recorded request is attached here as a PDF.

If you have any questions or comments, you can contact us at proqol@cvt.org. Note that unfortunately our capacity is quite limited, as this is a volunteer-run effort, but we will do what we can to respond within a couple of weeks.

Thank you!

The ProQOL Office
at The Center for Victims of Torture