Combatting Compassion Fatigue: Caring for People Living with HIV

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# Table of Contents

Abstract .......................................................................................................................... 4

Background and Significance Problem Statement ...................................................... 6

Needs Assessment ......................................................................................................... 7

Objectives and Aims ..................................................................................................... 10

Review of Literature .................................................................................................... 10

Theoretical Framework ............................................................................................... 14

Methodology .................................................................................................................. 15

  Outcome Measure ...................................................................................................... 15
  Study Interventions ................................................................................................... 15
  Setting ....................................................................................................................... 16
  Study Population ....................................................................................................... 16
  Subject Recruitment .................................................................................................. 17
  Consent Procedure .................................................................................................... 17
  Risks or Harms .......................................................................................................... 18
  Subject Costs and Compensation Project Timeline .................................................. 20
  Resources Needed/Economic Consideration ............................................................ 20

Evaluation Plan ............................................................................................................ 20

Data Maintenance/Security ......................................................................................... 20

Data Analysis ............................................................................................................... 20

Results ......................................................................................................................... 21

Recommendations and Discussion .............................................................................. 22

  Economic/Cost Benefit .............................................................................................. 24
Abstract

Purpose: The purpose of this project was to introduce healthcare workers, who provide care for people living with HIV, to mindfulness-based interventions as a mechanism to cope with compassion fatigue.

Methodology: The project utilized a pretest-posttest survey design to evaluate the impact of MBIs on compassion fatigue. The Professional Quality of Life (ProQOL-5) scale and a post-intervention survey were the tools used to measure the outcomes of the study. Identical ProQOL-5 surveys were administered prior to the start of implementing the mindfulness-based interventions and following implementation. Mindfulness-based interventions were administered over a six-week time frame at a long-term care/rehabilitation faculty in northern, NJ.

Results: There were no significant changes shown in burnout and secondary trauma stress. There was a significant increase found in the levels of compassion satisfaction. The majority of the people that used the mindfulness app reported that they found it to be beneficial and would use it in the future.

Implications: There are implications that incorporating mindfulness will yield economic/cost benefits in healthcare. These benefits include a reduction of costs related to employee mental health, employee physical health, decreased employee retention, and poor quality of care delivered to patients. Policies should be incorporated that promote awareness of compassion fatigue and management. Promoting management tools for compassion fatigue, such as mindfulness, will help to improve professional quality of life and individual self-care.

Introduction

Compassion fatigue is a form of work-related stress that affects one’s emotions and physical well-being (Adimando, 2017). The term consists of two components: burnout and
secondary traumatic stress (Cocker & Joss, 2016). Compassion fatigue negatively affects the ability to be empathetic or compassionate when providing care to patients (Coetzee & Laschinger, 2018). Some signs of compassion fatigue include a decrease in motivation, decrease in eagerness, and a lack of the ability to show empathy towards patients’ suffering (Gilmore, 2012). Compassion fatigue may physically present as headaches and decreased energy (DeTienne et al., 2012). Some psychological symptoms of compassion fatigue may include a decreased self-esteem and disempowerment (DeTienne et al., 2012).

Burnout is often due to stressors from a demanding environment, which then leads to exhaustion and frustration (Van Mol et al., 2016). High exposure to patients that are distressed and those that require a greater level of empathic interaction, may lead to healthcare workers to becoming burned out (Sorenson et al., 2016). Often times burnout is a slow loss of energy and motivation. People that experience burnout tend to develop a cynical attitude towards the workplace. In addition, there a sense of inadequacy which bring on feelings of guilt about ones’ quality of work (Montero-Marin, 2016).

The second component of compassion fatigue, secondary trauma stress, is described as a group of psychological features that similarly reflect posttraumatic stress disorder (Baird & Kracen, 2006). Symptoms of this component include recollection of traumatic events, high arousal, apathetic behavior, and avoidance (Sorenson et al., 2016). According to the Diagnostic and Statistical Manuel of Mental Disorder, secondary trauma stress can occur in someone that is not directly exposed a traumatic event (5th ed.; DSM-5; American Psychiatric Association [APA], 2013). Individuals, such as health care workers, may develop secondary trauma stress due to frequent interaction with others that have had traumatic experiences (Hensel, Ruiz, Finney, &
Dewa, 2015). Subsequently, healthcare workers start to fuse the emotional trauma of their patients with their own emotions (Adimando, 2017).

This project evaluated the effectiveness of a mindfulness-based intervention (MBI) to decrease compassion fatigue among healthcare workers that work with people living with the human immunodeficiency virus (PLWH).

**Background and Significance**

Compassion fatigue affects the entire spectrum of healthcare workers and ultimately negatively impacts patients’ quality of care (Cocker & Joss, 2016). The pressures of the healthcare system, such as high standards for performance, time constrictions, minimal support systems, and insufficient coping mechanisms to address patient suffering are associated with severe stress amongst healthcare workers (Sinclair et al., 2017). In one study by Sinclair et al. (2017), an average of 30% of professional care providers displayed symptoms of compassion fatigue. The highest levels of compassion fatigue were reported in healthcare workers that work in trauma and those with increased exposure to death (Rao & Taliaferro, 2015). A systematic review by VanMol (2015), suggested that up to 40% of intensive care nurses had a prevalence of compassion fatigue.

Several studies related to compassion fatigue have been conducted in a variety of healthcare specialties and settings (Coles, 2015). However, current research regarding compassion fatigue among healthcare workers that care for PLWH remains scarce (Coles, 2015). The current trends of the HIV epidemic, in regard to morbidity, mortality, and lack of knowledge regarding treatment regimens may influence the number of healthcare workers that develop compassion fatigue (Coles, 2015). Often times PLWH have many co-morbidities that may further exacerbate stress related to HIV (Coles, 2015).
Healthcare workers caring for PLWH are susceptible for developing compassion fatigue (Coles, 2015). There is a lack of information is known regarding healthcare workers that work in the HIV specialty (Coles, 2015). Working with PLWH, can become quite demanding emotionally, spiritually, and physically (Coles, 2015). At times, healthcare workers may feel powerless, a sense of failure, and guilt related to not being able to change their patients’ stressors (Coles, 2015). Some of the stressors that PLWH experience involves accepting the diagnosis as a serious, chronic disease that is incurable and stigmas surrounded having HIV (Coles, 2015).

Despite the research that exists about compassion fatigue and the negative effects on healthcare workers, there are minimal studies related to preventative measures (Duarte & Pinto-Gouveia, 2016). Mindfulness-based interventions (MBIs) have been acknowledged as a preventative measure and an empirically supported measure to alleviate compassion fatigue (Duarte & Pinto-Gouveia, 2016). MBIs are based on training a person’s attention (Burton et al., 2016). MBIs changes a person’s center of attention to focus on an everyday, in the moment experiences (Burton et al, 2016). Other benefits of using MBIs for healthcare workers include the potential to increase patient satisfaction and decrease health care expenditures related to compassion fatigue (Schroeder et al., 2016).

**Needs Assessment**

The demands of working in healthcare are highly stressful (Cocker & Joss, 2016). Often it requires healthcare workers to be compassionate and empathic on a frequent basis (Cocker & Joss, 2016). Consequently, these demands negatively affects the physical, mental, and economic well-being of healthcare workers (Cocker & Joss, 2016). Dissatisfaction that results from compassion fatigue is associated with more employee sick time, reduced productivity, and a higher employee turnover (Adimando, 2017). A study conducted by Upton (2018) at a hospital
setting, in the United Kingdom, described the prevalence of compassion fatigue and its negative outcomes. Upton noted that almost half of the nurses that partook in the study experienced mild to severe levels of compassion fatigue (Upton, 2018).

Although compassion fatigue is a term that has been studied for about 20 years, there are no set policies or guidelines in place for compassion fatigue either globally, nationally, statewide, or locally (Burton et al., 2016). Implementing an MBI for compassion fatigue among healthcare workers would encourage them to make cognitive and behavioral changes in their lifestyles (Burton et al., 2016). Furthermore, compassion fatigue can negatively affect healthcare workers caring for PLWH (Coles, 2015). Ultimately, the effects of compassion fatigue can worsen the already limited number of healthcare workers that work in the HIV specialty (Coles, 2015).

According to the New Jersey Department of Health (2019), New Jersey is ranked the fourth highest in the United States, for the amount of HIV cases. Additionally, New Jersey’s inner-cities, such as the city in which this project will be implemented, are where the most cases of HIV are found (New Jersey Department of Health, 2019). The need to have an adequate amount of healthcare workers to care for PLWH is essential in aiding in New Jersey’s HIV epidemic (Willard et al. 2016). Healthcare workers affected by compassion fatigue can potentially be a contributing factor that decreases the amount of available healthcare workers working in the HIV specialty (Coles, 2015).

A strengths, weaknesses, opportunities, and threats analysis (SWOT) was performed at an urban HIV long-term care/rehabilitation facility in northern New Jersey. Strengths included minimal costs to implementing an MBI; ease of accessibility of MBI via a smartphone app; and
support from key stakeholders such as the Chief Medical Officer, program coordinator, and HIV professional staff members.

MBIs require a self-motivated attitude (Burton et al., 2016). A potential weakness is that some people may be resistant to change or take a lackadaisical approach. Healthcare workers that are not aware that they have developed compassion fatigue may present strong resistance towards this intervention. An assessment of the healthcare workers and their willingness to participate will address the motivation to participate in the study. Another weakness may be the lack of access to a smartphone that accommodates the mindfulness app.

Opportunities of implementing a MBI include potentially helping healthcare workers in the HIV specialty to reduce or alleviate compassion fatigue symptoms. Furthermore, there is a possibility of improving patient satisfaction, and cut costs directly related to the negative effects of compassion fatigue (Burton et al., 2016).

Threats that may affect implementing a MBI include limited number of subjects for recruitment, lack of knowledge of compassion fatigue, and lack of knowledge regarding the benefits of MBIs. Certain beliefs or biases towards MBI may also pose a threat to implementing this project. Additionally, individuals may already have personal coping mechanisms in place for managing compassion fatigue.

Problem/Purpose Statement.

Healthcare workers that care for PLWH are at risk for developing compassion fatigue during their career (Coles, 2015). Compassion fatigue can contribute to low employee retention, health issues for healthcare workers, and decreased patient satisfaction (Adimando, 2017). There is a lack awareness of interventions available to alleviate the symptoms or prevent the outcomes of compassion fatigue. (Duarte & Pinto-Gouveia, 2016). Implementing a MBI has the potential
to positively impact compassion fatigue among healthcare workers caring for PLWH (Burton et al., 2016). The purpose of this project was to introduce healthcare workers, caring for PLWH, to MBIs as a mechanism to cope with compassion fatigue.

**Clinical Question**

This project proposed to answer the following clinical question: In healthcare workers, caring for PLWH, what is the impact of a MBI to decrease or prevent compassion fatigue? The specific population addressed in this question are healthcare workers working with PLWH. The intervention that is being implemented is an MBI, and the proposed outcome is a decrease or prevention in compassion fatigue.

**Aims and Objectives**

The aim of this project was to provide healthcare workers with an understanding of MBIs and its’ use to manage or prevent compassion fatigue. The following were the objectives of the project: 1.) assess the incidence of compassion fatigue and compassion satisfaction among healthcare workers; 2.) introduce a MBI to healthcare workers; 3) evaluate if MBIs have an impact on compassion fatigue.

**Review of Literature**

The purpose of this review of literature was to investigate three critical considerations: 1.) compassion fatigue among healthcare workers; 2.) MBIs for compassion fatigue among healthcare workers; 3.) compassion fatigue among healthcare workers caring for PLWH. A total of five databases were searched, including PubMed, CINAHL, Academic Search Premier, Medline, and Ovid. Literature was researched using different combinations of the following search terms: “compassion fatigue,” “healthcare,” “healthcare workers,” “HIV healthcare
workers,” “interventions,” “effects,” “awareness,” “mindfulness-based interventions,” and “mindfulness-based stress reduction.”

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines was used in order to narrow the research articles. A PRISMA diagram of the search can be found in Appendix A. Current literature, published between 2015-2020, were included in the review. The articles were of English language only, with sample populations of healthcare workers from any specialty. Based on the inclusion criteria and PRISMA process, 14 articles were selected for this literature review. The final articles were comprised of 12 research based and two non-research based.

Stress in the workplace is a significant problem that can negatively affect the health and safety of a worker (Centers for Disease Control Prevention [CDC], 2017). One-fourth-one-third of people working in the United States report high amounts of stress at work (CDC, 2017). Healthcare workers constantly succumb to the demands of the healthcare system which often times leads to severe stress (Sinclair et al., 2017). In healthcare, compassion fatigue is a concept used to explain a type of stress response that many healthcare workers experience (Sinclair et al., 2017). Compassion fatigue has long been considered as a main contributing factor to reduced compassion in health care, decreased staff retention, decreased efficiency, and decreased work attendance (Sinclair et al., 2017; Heeter et al., 2017).

An area of concern with the concept of compassion fatigue is differentiating the term from related concepts, such as burnout and distress (Sorenson et al., 2016). Several research studies have varying terms to define compassion fatigue (Sorenson et al., 2016). Not having a clearly defined term for the compassion fatigue, poses a limitation in regard to the validity of a
study (Sinclair et al., 2017; Sorenson et al., 2016). Efforts to develop a clearer definition of compassion fatigue will aid in further research on the topic (Sinclair et al., 2017).

Upon reviewing current literature, extensive research was found relating to compassion fatigue and healthcare workers. Many studies were comprised of diverse samples of healthcare workers in which the participant’s particular profession was not specified (Sinclair et al., 2017). Furthermore, a variety of healthcare specialties were also represented in the literature (Sorenson et al., 2016). Some professions and settings were disproportionately studied than others (Sorenson et al., 2016). Social workers, nurses, and physicians were among the majority of professions studied (Adimando, 2017; Duarte & Pinto-Gouveia, 2016; Pelon, 2017; Gregory, 2015). However, previous literature revealed that there were minimal studies on compassion fatigue in relation to advanced practice registered nurses (APRNs), respiratory therapists, physical therapists, and occupational therapists in relation to compassion fatigue (Sorenson et. al, 2016). Specialty areas that were studied extensively as opposed to others were: oncology, palliative, trauma, acute care (Adidmando, 2017; Duarte & Pinto-Gouveia, 2016).

Despite the research done to explore compassion fatigue and work-related stress, little effort has been directed towards preventative interventions (Duarte & Pinto-Gouveia, 2016). Recently, more studies have highlighted MBIs as an intervention for compassion fatigue (Duarte & Pinto-Gouveia, 2016). One meta-analysis supported this evidence by concluding that MBIs are beneficial in decreasing psychological symptoms like depression and anxiety (Khoury et al., 2015). The results of that study also indicated that MBIs can help improve quality of life (Khoury et al., 2015).

Similarly, a meta-analysis aimed to evaluate the effectiveness of MBIs in reducing stress among healthcare workers, found that MBIs had a significant positive effect on healthcare
workers stress levels (Burton et al., 2017). However, this meta-analysis did not differentiate between different types of stress such as compassion fatigue, or solely burnout (Burton et al., 2017). Hence, it may not be useful as supportive evidence because it is unclear of the impact of MBIs on compassion fatigue specifically (Burton et al., 2017). Nonetheless, several other studies did support evidence of MBIs as an effective measure to manage compassion fatigue (Adimando, 2017; Delaney, 2018; Duarte & Pinto-Gouveia, 2016; Gregory, 2015, Pfaff, et al., 2017). Some MBIs were studied alone or combined with other interventions such as self-care education (Adimando, 2017; Gregory, 2015). In addition, some studies combined more than one type of MBI and yielded positive results in reducing compassion fatigue (Gregory, 2015).

A technology-assisted meditation program was studied among healthcare providers to determine the effect on compassion fatigue (Heeter, 2017). The researchers of the study predicted that a technology-assisted yoga therapy meditation program would encourage healthcare providers to meditate on a consistent basis (Heeter, 2017). The results of the study found that using a smart phone app was an effective method for adherence to the meditation program (Heeter, 2017). In addition, the study supported the idea that meditation apps served as an inexpensive and a convenient way to improve compassion fatigue (Heeter, 2017).

Research directly related to compassion fatigue and healthcare workers caring for PLWH is scarce. Only two articles were found that specifically examined compassion fatigue and healthcare workers caring for PLWH (Coles, 2015; Verbana, 2019). In one article, researchers concluded that a large percentage of HIV-certified nurses reported a high level of compassion fatigue (Coles, 2015). In second article that was based on systemic reviews, researchers suggested that PLWH are more adherent to HIV treatment when they perceived that their healthcare provider was compassionate towards them (Verbana, 2019). This article further
emphasizes the need for healthcare workers caring for PLWH to practice methods that decrease or prevent compassion fatigue.

The results of the review are in agreement that compassion fatigue is a widespread concern in a variety of healthcare settings (Sorenson et al., 2016). In summary, MBIs whether used alone or in combination with other self-care interventions is well supported by the current literature as a method to prevent and/or counteract compassion fatigue (Burton, et al., 2017). Furthermore, MBIs have been used in diverse populations in the healthcare setting, and the results of several studies have also supported the benefits (Burton, et al., 2017). Many of these studies shared similar limitations of a small sample size, and a limited time frame (Burton, et al., 2017; Heeter, 2017). Some populations and specific disciplines have yet to be studied or have been studied minimally in comparison to others (Sorenson, 2016). Finally, due to the lack of research regarding compassion fatigue and healthcare workers caring for PLWH, more research is needed to explore this area of concern.

**Theoretical Framework**

The Plan-Do-Study-Act (PDSA), also known as the Deming cycle, was the theoretical framework chosen to guide this project. PDSA cycles are frequently used to implement methods for healthcare improvement (Taylor, 2014). The framework consists of four recurring stages that promotes learning and the development of a process (Deming, 1994). The plan stage refers to planning and identifying the strategy to implement the proposed change (Deming, 1994). It is the foundational basis of the entire cycle (Deming, 1994). The do stage involves implementing the actual change or experiment based on the plan that was developed (Deming, 1994). The study stage involves the evaluation or of the results of the predicted change (Deming, 1994). The act stage involves the decision process (Deming, 1994). Based on results of the project, a decision
should be made to fully implement and sustain the project (Deming, 1994). The other alternative would be to end the project without further investigating (Deming, 1994). The primary projected outcome of a PDSA is that the predicted change will result in an improvement over time (Deming, 1994). The PDSA model has shown to be successful for minor-scale changes that can be performed over a small length of time, on a continuous basis, for quality improvement (Leis & Shojania, 2017).

The PDSA framework was suitable for this project as there was a problem identified, a plan to implement an intervention, and a predictable outcome or change directly related to the intervention. Compassion fatigue was identified as the problem that needs to be changed. Compassion fatigue may present at different levels, varying from high to low or nonexistent. Participants not experiencing compassion fatigue can still implement a MBI as a method of prevention of compassion fatigue. The data collected following the intervention would then be evaluated. Finally, a decision should be determined on whether to sustain the project, with or without modifications, or to stop the project. The PDSA framework aids in acquiring new knowledge through reflection and evaluation of the implementation process (Stikes & Barbier, 2013). A concept map illustrating the PDSA framework for this study is located in Appendix B.

**Methodology**

**Study Design**

The study used a pretest-posttest survey design to evaluate the impact of MBIs on compassion fatigue. The survey that was used was the Professional Quality of Life (ProQOL-5) scale. The scale measures the quality of a person’s perception regarding their profession in the helper-like position (Stamm, 2009). Two components comprise the professional quality of life: compassion satisfaction and compassion fatigue (Stamm, 2009). Compassion satisfaction is
described as the positive component of professional quality of life (Stamm, 2009). It involves the pleasure that one receives from caring for others, whereas compassion fatigue is the negative component that develops from frequent altruistic behaviors when caring for others (Stamm, 2009).

The ProQOL-5 scale has been applied extensively in caregiver research (Hemsworth, 2017). According to the results of a study by Hemsworth (2017), the reliability and validity of the scale has shown to be stable and consistent. As per the ProQOL-5 form, permission is granted for anyone’s use as long as the author should is credited, that it not altered, and it should not be sold. The ProQOL tool can be found in Appendix D. The survey was administered prior to and then six weeks following the implementation of an MBI.

**Setting**

The study was conducted at an urban long-term care/rehab facility located in northern New Jersey. The site is a 75-bed facility that serves as a place of residence for many women and men living with HIV. Furthermore, it offers comprehensive medical and behavioral health services for its clients.

**Study Population**

The study population was selected from a convenience sample of healthcare workers, employed at the healthcare facility, and that directly cared for PLWH. The following disciplines were included in the project: primary care practitioners (PCPs), Registered Nurses (RNs), licensed practical nurses (LPNs), medical assistants, physical therapists, social workers, and activity counselors. All study participants were at least 18 years of age, English speaking, and were able to read English. The sample size required a minimum of 30 study participants to complete both pre- and post- ProQOL-5 surveys.
The exclusion criteria for this population included non-healthcare workers, healthcare workers that did not work with PLWH, those that were less than 18 years of age, and those that were non-English speaking, or unable to read English. All information included in the study were written in English. Therefore, the study participants were fluent in English.

Subject Recruitment

Recruitment took place during two in-person luncheons, via email, and several in-person sessions at the approved site. The in-person sessions were the preferred method of subject recruitment. However, if COVID 19 requirements prohibited in-person meetings, the virtual luncheons were to be used as the alternative. The luncheons were offered at the end of September. During the recruitment process, study participants were given information regarding the research study and were able to ask questions. To notify potential participants, recruitment emails were also sent out to inform study participants about the luncheons. Study participants were informed that participation was voluntary, anonymous, and that responses to the ProQOL-5 surveys would be kept confidential. There were no payments offered to study participants.

Consent Procedure

Study participants were given electronic copies the consent form that were approved by both healthcare facility’s IRB and the Rutgers IRB. The consent form can be found in Appendix F. The consent form described the purpose of the research study, the rights and responsibilities of the participants, risk and benefits of the participants, confidentiality, and how the data would be kept secure. Contact information for the Primary Investigator (PI), Co-Investigator (Co-PI), and the Rutgers IRB were also listed on the consent.

Risks, Harms, and Benefits
The potential risks for this research study were minimal. No physical, financial or professional risks were anticipated. There was minor a potential risk for psychological or emotional distress related to the ProQOL-5 survey questions. Subject participants were advised to either skip the question or withdraw from the research study altogether if they were experiencing emotional distress. In addition, as a resource, participants were given pocket cards from ProQOL.org and were referred to the website for further information. The pocket cards include information on coping with compassion fatigue. As per the website, permission to use and distribute the pocket cards is freely granted if it is not altered and that the author is credited. The pocket cards are located in Appendix G.

One of the purposed benefits of participating in the research study was to develop an awareness of compassion fatigue. The second benefit was to gain an understanding of mindfulness interventions as method to manage stress related to compassion fatigue. However, none of these benefits were guaranteed.

**Subject Costs and Compensation**

There were no proposed costs for the study participants to take part in the research study. It did, however, require the participants to commit to mindfulness activities for a minimum three times a week and at least 15 minutes per session.

**Study Interventions**

The intervention for this study was a mindfulness app called the CALM app. CALM has a dedicated academic team in developing evidence-based mindfulness research. Mindfulness can be defined as a state of being aware of the present moment or environment with a non-judgmental attitude (Huberty et al., 2020). It has been shown to improve sleep disturbance, anxiety, and stress (Huberty et al., 2019; Huberty et al., 2020).
The CALM app is conveniently accessed via a smartphone device or computer. Currently, there are greater than 500 mindfulness-based cellphone apps (Huberty et al., 2020). CALM is the most known in the United States (Huberty et al., 2020). It provides more than 100 guided meditations that assist consumers on the foundations of meditation and how to utilize it in their lives (Huberty et al., 2020). It offers a variety of mindfulness activities to reduce stress, promote relaxation, and to assist with sleep. The study participants were to commit to using the app for a minimum three times a week and at least 15 minutes per session. Following six weeks of participation of the MBIs, the post-test surveys were administered.

**Outcomes to be Measured**

The ProQOL-5 scale allows for two outcomes to be measured. The outcomes measured were the cumulative incidence of compassion fatigue and compassion within the sample population. Baseline compassion fatigue and compassion satisfaction levels were obtained at the start of the project. At the conclusion of the implementation period, the ProQOL-5 survey was repeated to obtain post-intervention compassion fatigue and compassion satisfaction levels. Baseline compassion fatigue and compassion satisfaction levels were compared to the post-intervention scores to evaluate any changes. Ultimately, these outcomes measured the effect of a six-week MBI on compassion fatigue and compassion satisfaction levels. Finally, the post-intervention survey measured qualitative data regarding mindfulness, compassion fatigue, and the CALM app.

**Project Timeline**

Project planning and proposal writing took place from January 2020 to May 2020. The project proposal first went through the site’s IRB as the primary IRB. Also, in the spring of 2020 the project proposal was presented to the DNP project team. The DNP project team accepted the
project proposal and then it was submitted Rutgers IRB during the summer of 2020. Following Rutgers IRB approval, the project began implementation in September 2020. The implementation process took place over a 6-week time period. After the implementation period was completed, data was then collected, evaluated, and data analysis began in the beginning of November 2020. Finalization of the DNP paper and presentation was completed at the end of November 2020. It is anticipated that the DNP project will be presented in poster format during Rutgers DNP poster day that will be held in April 2021. The project timeline is found in Appendix J.

**Resources Needed/Economic Considerations**

The total cost of the project was approximately $363.99. These costs included the printing cost of 40 consents ($1.60), the printing cost of 60 surveys ($2.40), a year subscription of the CALM app (59.99), two in-person luncheons ($280.00), and a DNP poster ($20.00). The project budget is outlined in Appendix I.

**Evaluation Plan**

**Data Analysis Plan**

Data collection ended on November 14, 2020. Quantitative analysis of data was done by using SPSS. The Mann-Whitney test was used to evaluate the non-parametric statistics that were obtained from the research study. The data was based on the results of the pre-and post-ProQOL surveys. Additionally, qualitative data was derived from the post-intervention surveys.

**Data Maintenance/Security**

The results to the pre-test and post-test ProQOL-5 surveys were anonymous and confidential. Participants were asked not to share any identifying personal information. Physical copies will be stored in a locked cabinet in which only the Co-Primary Investigator (Co-PI) and
Primary Investigator (PI) will be able to access. All physical copies will be destroyed six years following completion of the project.

Results

The attrition rate was 135% as 21 participants that did not complete the project to the end. A total of 31 healthcare workers (26 pre-test ProQOL-5 and 5 post-test ProQOL-5) participated in this project. Appendix K contains a table displaying the results of the pre-test ProQOL-5 and post-test ProQOL-5 scores. The ratings of the ProQOL-5 were based on the following scoring system: 22 or less = Low; 23 to 41 = Moderate; 42 or more = High. The mean ratings for the pre-test ProQOL-5 were as follows: compassion satisfaction (M = 42.96, “High Compassion Satisfaction”), burnout (M = 20.58, “Low Burnout”), and secondary traumatic stress (M = 21.58, “Low Secondary Traumatic Stress”). The mean ratings for the post-test ProQOL-5 were as follows: compassion satisfaction (M= 47.40, “High Compassion Satisfaction”), burnout (M=18.00, “Low Burnout”), and secondary traumatic stress (M = 17.80, “Low Secondary Traumatic Stress”).

Mann-Whitney tests were used to compare non-parametric data (pre-test ProQOL-5 versus post-test ProQOL-5) for compassion satisfaction, burnout, secondary trauma stress, and the 30 individual ProQOL-5 items. The Mann-Whitney test was chosen instead of the more common t test for independent means because of the Likert ratings used and for the small sample size (N = 31). Out of the 33 comparisons, two were statistically significant at the p < .05 level. Specifically, posttest scores were higher for the compassion satisfaction scale (p = .03) and Item 6, I feel invigorated after working with those I help (p = .008). See Appendix L which displays the results of the Mann-Whitney tests.
There were a total of 16 participants that completed the post-intervention survey responses. Of the 16 participants, 5 responded that they used the CALM app and 11 responded that they did not. Among the 5 participants that did use the app, 4 reported positively regarding the CALM app and mindfulness. These responses included: mindfulness is useful in relieving compassion fatigue; they would recommend mindfulness to relieve compassion fatigue; he/she believes that they will continue to use mindfulness activities in the future. A single participant responded that she found the app to be “time consuming”, “difficult to navigate”, and that she does not believe that she will use the app in the future.

When asked the reasons as to why the app was not used, the 11 participants had three general responses: 1.) they found they did not remember to use the app; 2.) that they were too busy to use the app; 3.) that they had technical difficulties and were unable to log onto the app. Appendix M displays the results of the post-intervention surveys.

**Recommendations and Discussion**

This project sought to answer the following clinical question: in healthcare workers, caring for PLWH, what is the impact of an MBI to decrease or prevent compassion fatigue? According to the baseline results, the study population had low levels of compassion fatigue and high levels of compassion satisfaction. The mean of the pre-test ProQOL-5 scores revealed low levels of burnout and secondary trauma stress. Furthermore, baseline compassion satisfaction levels were high prior to the intervention. When compared to the post-test ProQOL-5 scores, there were no significant changes in burnout and secondary traumatic stress. However, the findings showed a significant increase in compassion satisfaction levels.

The results of the project did not reflect the current literature as it relates to compassion fatigue in the healthcare field. According to Sinclair et al (2016), working in the healthcare field
is acknowledged as stressful due to minimal support systems and frequent interaction with patients’ suffering. Coles (2015) reviewed responses from the Association of Nurses in AIDS Care (ANAC) which revealed that many found working in the HIV/AIDS specialty to be an emotionally and physically demanding career. Within the ANAC organization, moderate levels of compassion fatigue were found (Coles, 2015). Many of participants in this project admitted that they felt stressed while at work. However, the results of the ProQOL-5 scores yielded low levels of compassion fatigue for both the pre-test & post-test surveys.

Most of the participants from the post-intervention surveys did not use the CALM app. The biggest reason for not using the app was that the participants did not remember to use it. The participants that did use the app found MBIs to be beneficial for compassion fatigue. In addition, they found the CALM to be a useful tool to promote mindfulness. Their responses suggest that they would continue to use the app and incorporate mindfulness into their daily lives to help alleviate compassion fatigue.

The project did fulfill the objectives as proposed. The first objective of the project was to assess the incidence of compassion fatigue and compassion satisfaction. This was met using the ProQOL-5 tool prior to beginning implementation of an MBI. The second objective was met by introducing the participants to an MBI through the use of the CALM app. Although all participants were given the opportunity to use CALM, only a few actually participated. Therefore, many did not take advantage of this opportunity. The final objective was to evaluate if an MBI had an impact on compassion fatigue levels in which there were no changes. However, there may be a possibility that MBIs can serve as a preventative measure against compassion fatigue. Further research is necessary to support these findings.

An apparent key facilitator of this project was having the support of the key stakeholders.
which allowed for opportunities for recruitment and to assess the need for project. On the contrary, the use of a phone app was anticipated to facilitate the project, but instead, it served as a barrier for a small number of participants. Despite accessibility of the app on a personal device, there was an unexpected consequence in which some participants found it difficult to login on or to navigate the app. Second, a lack of self-motivation to participate in using the app also posed barrier for the project. Third, the recruitment process and data collection were complicated due to the current coronavirus disease 2019 (COVID-19) policies that were enforced by the study site.

**Limitations**

The limitations of this project should be taken in account. First, the small sample size affects the reliability, non-response bias, and the generalizability of the project. A preferred sample would be one of a larger size and with a matched number of participants for the pre- and post-ProQOL-5 surveys to compare. The project had a high attrition rate at 135%. Second, the sample population was taken from a small facility located in northern NJ. Ideally, a sample that includes a much broader population from different regions, and the inclusion of demographic characteristics should be obtained. Third, the short time frame of six-weeks also poses limitations to the study. Thus, these limitations should be acknowledged when interpreting the findings of this project.

**Implications on Economic/Cost Benefits of Project**

The implications on economic/cost benefits of the project include a reduction of costs related to employee mental and physical health. Compassion fatigue management is related to high levels of stress that can exacerbate or cause health problems (DeTienne et al., 2012). Managing stress related to compassion fatigue may help to reduce cost related to employee
turnover (Adimando, 2017). These costs include the need to train new employees due to low employee retention (Adimando, 2017).

**Impact on healthcare quality/safety**

It is implicated that the management or prevention of compassion fatigue will improve quality of healthcare delivered to patients (Duarte & Pinto-Gouveia, 2016). Patients that receive care that lacks compassion may find it difficult to adhere to their treatment plans (Verbana, 2019). Compassion fatigue levels are associated with the ability or lack of compassion displayed when caring for a patient (Adimando, 2018). Although this outcome was not studied in this project, it is something that may be studied in the future. The safety of care that patients receive may also be impacted by the employee’s level of compassion fatigue (Adimando, 2018). Employees that have increased levels of compassion fatigue may negatively impact their ability to safely provide care to patients (Adimando, 2017).

**Policy Implications**

Policy implications for healthcare facilities should include mental health assistance and resources for employees. For instance, the CALM app, which was used in this project, offers a business version that specifically targets workplace stress. In the healthcare field where there is a high incidence of compassion fatigue (Sinclair et al., 2017). Evidence support policies that help to protect the mental well-being of healthcare workers while providing a non-judgmental approach (Sinclair et al., 2017). Administrators of a healthcare facility should be aware when an employee’s mental health is affected due to compassion fatigue. A healthy work environment that is supportive of preventative measures for compassion fatigue can help to promote a positive work/life balance.

**Practice Implications**
Compassion fatigue is not an actual diagnosis. Therefore, there are no practices specifically for compassion fatigue. However, certain health conditions may be exacerbated or linked to the stress of compassion fatigue (Schroeder et al., 2016). Consequently, these health conditions and costs related to treatment may pose some implications on practice. Implications on practice related to compassion fatigue may include methods of managing workplace stress such as MBIs. MBIs have shown to alleviate symptoms related to compassion fatigue and has been recommended due to its effectiveness (Schroeder et al., 2016).

**Plan for Future Sustainability**

It is possible that implementing MBIs may raise awareness of its benefits for management of compassion fatigue. If more healthcare facilities are aware of the negative effects of compassion fatigue, they may be more inclined to offer support to their employees. Implementing MBIs may be a convenient an inexpensive method to coping with compassion fatigue. Once mindfulness skills are acquired individuals may find it beneficial to maintain them minimize compassion fatigue. The site facility may want to consider purchasing the CALM app for their employees after seeing the effect of the project.

**Plans for Dissemination and Professional Reporting**

Following completion of the project, the findings of project will be disseminated in a final paper, a presentation, and by poster illustration. The findings can also be published in a scholarly article by a peer-reviewed nursing journal. The article will summarize the effects of a MBI on compassion on healthcare workers caring for PLWH. The Co-PI plans to inform the participants by including findings the facility’s monthly newsletter with the help of the director of marketing and development.

**Conclusion**
The purpose of the project was to introduce healthcare workers, caring for PLWH, to MBIs as a mechanism to cope with compassion fatigue. Although, the participants were given the opportunity access an MBI, many did not participate. Of the few that participated in using the MBI, did not show any impact on compassion fatigue levels. There was, however, an improvement in compassion satisfaction which may be considered a positive factor for MBI use. It is possible that MBIs may serve as a preventative mechanism for those that do not have compassion fatigue. In addition, the use of a technology-assisted mindfulness program may also assist in adherence (Heeter, 2017). However, more research would be necessary to support these findings.
References


New Jersey Department of Health. (2019). Chronic Disease and Illnesses: HIV.


COMBATTING COMPASSION FATIGUE


Appendix A

**PRISMA 2009 Flow Diagram**

- **Records identified through database searching** (PubMed, CINAHL, Academic Search Premier, Medline, and Ovid) (n = 2,268)
- **Additional records identified through other sources** (CDC, Rutgers) (n = 2)

**Records after duplicates removed** (n = 224)

- **Records screened** (n = 55)
- **Records excluded** (n = 17)

- **Full-text articles assessed for eligibility** (n = 38)
  - **Full-text articles excluded, with reasons** (n = 6)
    - Articles published before 2015
    - Articles not related to the key terms

**Studies included** (n = 14)
Appendix B

Conceptual Framework

- Project is sustainable
  - modifications are made
  - modifications are unnecessary
- Project is terminated

- Assess the incidence of compassion fatigue among healthcare workers
- Introduce a mindfulness intervention to healthcare workers
- Evaluate if a mindfulness intervention has an impact on compassion fatigue
- Prediction:
  - mindfulness decreases compassion fatigue levels
  - mindfulness can prevent compassion fatigue

- Analyze data
- Evaluate outcome of a mindfulness intervention

- Implement a mindfulness intervention among participants during a 6 week time period
- Begin data collection
Appendix C

**Table of Evidence**

EBP Question: How does a mindfulness-based intervention impact compassion fatigue in healthcare workers caring for PLWH?

<table>
<thead>
<tr>
<th>Article #</th>
<th>Author &amp; Date</th>
<th>Evidence Type</th>
<th>Sample, Sample Size &amp; Setting</th>
<th>Study findings that help answer the EBP question</th>
<th>Limitations</th>
<th>Evidence Level &amp; Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adimando, A. (2017)</td>
<td>Mix methods: Qualitative &amp; Quantitative</td>
<td>Nurses ≥ 18 years old, actively employed, in psychiatry and/or pediatrics, or emergency room department, n=24, Large urban hospital in New England.</td>
<td>The majority of participants expressed the greatest satisfaction with the portions of the workshop that involving relaxation and/or stress-relieving exercises</td>
<td>The location was not conducive to the study. The Participants had to be paid Restricted email access to contact participant due to policies. Insufficient amount of time to complete study.</td>
<td>Level: II Quality: B</td>
</tr>
<tr>
<td>2</td>
<td>Burton, A., Burgess, C., Dean, S., Koutsopoulou, G.Z., &amp; Hugh-Jones, S. (2017)</td>
<td>Systematic Review Meta-Analysis</td>
<td>Participants worked that work in the healthcare setting, including nursing, midwifery, and mental health. Several studies included a variety of HCP,</td>
<td>Results of meta-analysis suggest that MBIs have the potential to significantly improve stress among HCPs</td>
<td>File drawer Small sample sizes and poor quality use of theoretical frameworks</td>
<td>Level: II Quality: B</td>
</tr>
</tbody>
</table>
including nurses, doctors, and occupational therapists. One study involved a combination of HCP, educational professionals, ad service industry employees. Sample sizes ranged from 16 to 52 participants, N=7.

<table>
<thead>
<tr>
<th></th>
<th>CDC (2017).</th>
<th>Not applicable.</th>
<th>Not applicable.</th>
<th>One-fourth-one-third of people working in the US report high amounts of stress at work. Work-related stress can negatively impact the health and safety of the employee.</th>
<th>Not applicable.</th>
<th>Level IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Coles, B. A. (2015).</td>
<td>Mix methods, Quantitative/qualitative correlational</td>
<td>Members of the Association of Nurses in AIDS Care (ANAC) that were HIV certified Nurses (ACRN) with ( \geq 2 ) years of experience, ( n=83 ), setting: not applicable as surveys were sent via the internet</td>
<td>A large percentage of ANAC nurses reported a moderate level of compassion fatigue scores in the study.</td>
<td>The level of accuracy to which participants responded to items on the survey is uncertain. The use of a correlational design and survey methodology caused a possible response bias.</td>
<td>Level III Quality B</td>
</tr>
<tr>
<td></td>
<td>Delaney, M.C. (2018)</td>
<td>Observation mixed research pilot study</td>
<td>Female nurses, n=13, setting.</td>
<td>Pre-to post scores of secondary trauma and burnout declined significantly and were negatively associated with self-compassion, and mindfulness. Resilience and compassion satisfaction scores increased.</td>
<td>Small sample size. Study did not have a control group. Length of time for study insufficient. The entire sample were women.</td>
<td>Level: II Quality: B</td>
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<tr>
<td>6</td>
<td>Duarte, J., Pinto-Gouveia. (2016)</td>
<td>Mixed research: Qualitative &amp; Quantitative</td>
<td>Oncology nurses, n=48, two major hospitals in Portugal.</td>
<td>Results suggested that nurses receiving an MBI reported a significant decrease in burnout and stress, greater satisfaction with life as opposed the nurses in the comparison group.</td>
<td>Small sample size, mostly women, low response rates.</td>
<td>Level: II Quality: B</td>
</tr>
<tr>
<td>7</td>
<td>Gregory, A. (2015)</td>
<td>Qualitative quantitative/quasi-experimental</td>
<td>Social workers with a minimum of 75% direct care contact with people with disabilities, n=11, private yoga studio.</td>
<td>The study suggested that participation in a yoga and mindfulness program can have a positive increase in the social worker’s perception of the professional relationship with their clients. These results suggest that the absence of a coping resource could be a predictor</td>
<td>Small sample size, The study was limited to one agency. The study lacked diversity as it being comprised of 90.9% white. Poor attendance by participants.</td>
<td>Level: II Quality: B</td>
</tr>
<tr>
<td>8</td>
<td>Heeter, C., Lehto, R., Allbritton, M., Day, T., Wiseman, M.</td>
<td>Qualitative</td>
<td>Hospice and palliative professionals, n=36, Midwest healthcare network</td>
<td>Results of a technology-assisted meditation program showed a reduction in compassion fatigue and burnout.</td>
<td>Small sample convenience sample size, Used self-reported measures</td>
<td>Level: II Quality: B</td>
</tr>
<tr>
<td>Page</td>
<td>Authors</td>
<td>Methodology</td>
<td>Sample Characteristics</td>
<td>Study Results</td>
<td>Heterogeneity</td>
<td>Study Level</td>
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<tr>
<td>9</td>
<td>Khoury, B., Sharma, M., Rush, S.E., &amp; Fournier, C. (2015)</td>
<td>Meta-analysis</td>
<td>Quantitative studies that sample was comprised of healthy adults and used a mindfulness-based stress reduction intervention to investigate stress or anxiety outcomes, n=29</td>
<td>Results suggested positive effects on stress, anxiety, depression, distress, and quality of life, and burn out.</td>
<td>Heterogeneity was high probably due to differences in study design, implemented protocols, and the assessed outcomes.</td>
<td>Level III</td>
</tr>
<tr>
<td>10</td>
<td>Pfaff, K.A., Freeman-Gib, L., Patrick, L.J., DiBiase, R., Moretti, O. (2017)</td>
<td>Mix-methods: Qualitative and Quantitative</td>
<td>Interprofessional staff, n=12, a regional cancer center in Canada</td>
<td>The study results support the benefit of increasing awareness and engaging in self-care strategies such as mindfulness and other personal reflective practices in reducing clinical stress.</td>
<td>Small sample size and attrition rate.</td>
<td>Level: II</td>
</tr>
<tr>
<td>11</td>
<td>Pelon, S.B. (2017)</td>
<td>Descriptive, Cross-Sectional</td>
<td>Social work clinicians employed at a hospice organization within the state of Michigan, and have a baccalaureate or graduate degree, in social work from an accredited school of social work, involvement in the direct care of a</td>
<td>Negative correlation of compassion fatigue and compassion satisfaction. highlights the importance of finding ways to assist hospice social workers both to cope with the unique stressors of their work.</td>
<td>Small sample size. The experience of compassion fatigue is just one point in time. The quantitative nature of the study did not offer opportunity for the researcher to follow up with the participants.</td>
<td>Level: II</td>
</tr>
<tr>
<td>Study</td>
<td>Author(s)</td>
<td>Methodology</td>
<td>Sample Size/Setting</td>
<td>Key Findings</td>
<td>Level</td>
<td>Quality</td>
</tr>
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<tr>
<td>12</td>
<td>Sinclair, Raffin-Bouchal, Venturato, Mijovic-Kondejewski, &amp; Smith-MacDonald, 2017</td>
<td>Meta-analysis</td>
<td>90 studies</td>
<td>The conceptualization of compassion fatigue may focus on limited facets. Risk factors for compassion fatigue include job-related factors, fewer healthcare qualifications, and less years of experience.</td>
<td>Strength of evidence criteria was not applied for inclusion.</td>
<td>Level: III</td>
</tr>
<tr>
<td>13</td>
<td>Sorenson, C., Bolick, B., Wright, K., Hamilton, R. (2016)</td>
<td>Systemic Review</td>
<td>43 articles</td>
<td>APRNs, respiratory, physical therapists, and occupational therapists were poorly represented. More research needed to evaluating compassion fatigue in healthcare providers. The definition of compassion fatigue has evolved. Thus, a need for well-developed concept analysis is evident.</td>
<td>Degree of validity is poor due to the need of a conceptualized definition of compassion fatigue.</td>
<td>Level: III</td>
</tr>
<tr>
<td>14</td>
<td>Verbrana, P. (2017)</td>
<td>News article</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>PLWH are more adherent to HIV treatment when they</td>
<td>Level V</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>perceived that their healthcare provided displayed empathy and compassion</td>
<td></td>
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</tr>
</tbody>
</table>
### Professional Quality of Life Scale (ProQOL)

*Compassion Satisfaction and Compassion Fatigue (ProQOL) Version 5 (2009)*

When you help people you have direct contact with their lives. As you may have found, your compassion for those you help can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a healthcare worker. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the *last 30 days*.

<table>
<thead>
<tr>
<th>1=Never</th>
<th>2=Rarely</th>
<th>3=Sometimes</th>
<th>4=Often</th>
<th>5=Very Often</th>
</tr>
</thead>
</table>

___ 1.) I am happy.

___ 2.) I am preoccupied with more than one person I help.

___ 3.) I get satisfaction from being able to help people.

___ 4.) I feel connected to others.

___ 5.) I jump or am startled by unexpected sounds.

___ 6.) I feel invigorated after working with those I help.

___ 7.) I find it difficult to separate my personal life from my life as a healthcare worker.

___ 8.) I am not as productive at work because I am losing sleep over traumatic experiences of a person I help.

___ 9.) I think that I might have been affected by the traumatic stress of those I help.

___ 10.) I feel trapped by my job as a healthcare worker.

___ 11.) Because of my helping, I have felt "on edge" about various things.

___ 12.) I like my work as a healthcare worker.

___ 13.) I feel depressed because of the traumatic experiences of the people I help.

___ 14.) I feel as though I am experiencing the trauma of someone I have helped.
15.) I have beliefs that sustain me.
16.) I am pleased with how I am able to keep up with helping techniques and protocols.
17.) I am the person I always wanted to be.
18.) My work makes me feel satisfied.
19.) I feel worn out because of my work as a healthcare worker.
20.) I have happy thoughts and feelings about those I help and how I could help them.
21.) I feel overwhelmed because my case workload seems endless.
22.) I believe I can make a difference through my work.
23.) I avoid certain activities or situations because they remind me of frightening experiences of the people I help.
24.) I am proud of what I can do to help.
25.) As a result of my helping, I have intrusive, frightening thoughts.
26.) I feel "bogged down" by the system.
27.) I have thoughts that I am a "success" as a helper.
28.) I can't recall important parts of my work with trauma victims.
29.) I am a very caring person.
30.) I am happy that I chose to do this work.

© B. Hudnall Stamm, 2009. Professional Quality of Life: Compassion Satisfaction and Fatigue Version 5 (ProQOL). /www.isu.edu/~bhstamm or www.proqol.org. This test may be freely copied as long as (a) author is credited, (b) no changes are made, and (c) it is not sold.
YOUR SCORES ON THE PROQOL: PROFESSIONAL QUALITY OF LIFE SCREENING

Based on your responses, place your personal scores below. If you have any concerns, you should discuss them with a physical or mental health care professional.

Compassion Satisfaction

Compassion satisfaction is about the pleasure you derive from being able to do your work well. For example, you may feel like it is a pleasure to help others through your work. You may feel positively about your colleagues or your ability to contribute to the work setting or even the greater good of society. Higher scores on this scale represent a greater satisfaction related to your ability to be an effective caregiver in your job.

If you are in the higher range, you probably derive a good deal of professional satisfaction from your position. If your scores are below 23, you may either find problems with your job, or there may be some other reason—for example, you might derive your satisfaction from activities other than your job. (Alpha scale reliability 0.88)

Burnout

Most people have an intuitive idea of what burnout is. From the research perspective, burnout is one of the elements of Compassion Fatigue (CF). It is associated with feelings of hopelessness and difficulties in dealing with work or in doing your job effectively. These negative feelings usually have a gradual onset. They can reflect the feeling that your efforts make no difference, or they can be associated with a very high workload or a non-supportive work environment. Higher scores on this scale mean that you are at higher risk for burnout.

If your score is below 23, this probably reflects positive feelings about your ability to be effective in your work. If you score above 41, you may wish to think about what at work makes you feel like you are not effective in your position. Your score may reflect your mood; perhaps you were having a "bad day" or are in need of some time off. If the high score persists or if it is reflective of other worries, it may be a cause for concern. (Alpha scale reliability 0.75)

Secondary Traumatic Stress

The second component of Compassion Fatigue (CF) is secondary traumatic stress (STS). It is about your work related, secondary exposure to extremely or traumatically stressful events. Developing problems due to exposure to another’s trauma is somewhat rare but does happen to many people who care for those who have experienced extremely or traumatically stressful events. For example, you may repeatedly hear stories about the traumatic things that happen to other people, commonly called Vicarious Traumatization. If your work puts you directly in the path of danger, for example, field work in a war or area of civil violence, this is not secondary exposure; your exposure is primary. However, if you are exposed to others’ traumatic events as a result of your work, for example, as a therapist or an emergency worker, this is secondary exposure. The symptoms of STS are usually rapid in onset and associated with a particular event. They may include being afraid, having difficulty sleeping, having images of the upsetting event pop into your mind, or avoiding things that remind you of the event.

If your score is above 41, you may want to take some time to think about what at work may be frightening to you or if there is some other reason for the elevated score. While higher scores do not mean that you do have a problem, they are an indication that you may want to examine how you feel about your work and your work environment. You may wish to discuss this with your supervisor, a colleague, or a health care professional. (Alpha scale reliability 0.81)
Appendix E

Post-Intervention Survey

Please Circle Answers

1.) Did you use the Calm app?
   Yes          No

2.) If not, was there a reason why you did not to use the app? Please briefly explain.

3.) Do you find mindfulness useful in relieving compassion fatigue?
   Yes          No

4.) Would you recommend mindfulness to relieve compassion fatigue?
   Yes          No

5.) Are you still using the CALM app?
   Yes          No

6.) If so, how often are you using the CALM app?
   Once a week   More than once a week   Less than once a week

7.) Do you believe that you will continue to use mindfulness activities in the future?
   Yes          No

8.) What is your age range?
   25-34 years old   35-44 years old   45-54 years old   55 or older
Appendix F

CONSENT TO TAKE PART IN A RESEARCH STUDY

Title of Study: Combatting Compassion Fatigue: Caring for People Living with HIV

Principal Investigator: Suzanne Willard, PhD, APN-C, FAAN

Co-Investigator: Antoinette Cole, RN, BSN, Family DNP Candidate

The information in this consent form will provide more details about the research study and what will be asked of you if you choose to take part in it. If you have any questions now or during the study, if you choose to take part, you should feel free to ask them and should expect to be given answers you completely understand. After your questions have been answered and you wish to take part in the research study, you will be given a copy of this consent form. You are not giving up any of your legal rights by agreeing to take part in this research.

Who is conducting this study?

Suzanne Willard is the Principal Investigator of this research study. A Principal Investigator has the overall responsibility for the conduct of the research. However, there are often other individuals who are part of the research team. Antoinette Cole is the Co-Investigator of the study. Suzanne Willard may be reached at [contact information] and Antoinette Cole may be reached at [contact information]. You will be given a copy of the consent form to keep.

Why is this study being done?

This study is being done to help healthcare workers become aware of compassion fatigue. Compassion fatigue is a type of stress that may develop from taking care of patients. Taking care of patients with different conditions can lead to compassion fatigue. It can affect following:

- A person’s ability to show emotions
- The way a person manages their feelings

The study will also introduce mindfulness as a way manage stress related to compassion fatigue. Mindfulness is set of strategies used to promote a healthy mind or mental health. It involves focusing your attention on your present feelings, moment, and environment. Mindfulness techniques have been proven to help with calming a person’s mood and controlling emotions.

Who may take part in this study?

Any healthcare worker that is an employee at [Broadway House] and works with people living with HIV can take part in the study. Participants must be able to read English and at least 18 years of age.
Who may not take part in the study?

People who may not take part in the study are:

- People that do not work at Broadway House.
- People that do not work in healthcare.
- People that do not work with people living with HIV

Why have I been asked to take part in this study?

You have been asked to take part in the study because you are a healthcare worker that works with people living with HIV.

How long will the study take and how many subjects will take part?

The study will take 6 weeks. Thirty participants are expected to take part in the research study.

What will I be asked to do if I take part in this study?

You will be asked to attend a recruitment session that will be held either by an in-person luncheon or via a Webex meeting. The purpose of recruitment session is to inform you about the study.

At the start of the study, you will be asked to answer 30 questions about stress related to work. Also, you will be asked to use an app that teaches you ways to manage your stress three times a week. When the six weeks are finished, you will be asked to answer the same 30 questions again.

In addition, a five-question survey will also be given two weeks after the study is completed.

What are the risks of harm or discomforts I might experience if I take part in this study?

Most people do not experience any risks from answering the questions included in this research. Most people do not experience any risks by taking part in mindfulness activities. However, there may be a small risk that the questions on the survey may make you feel uncomfortable. If this happens, you may skip the particular question or drop out of the research study altogether.

Are There Any Benefits To Me If I Choose To Take Part In This Study?

The benefit of taking part in this study may include developing an awareness of compassion fatigue. Also, you may learn ways to manage negative emotions or stress related to compassion fatigue. However, it is possible that you may not receive any benefit from taking part in this study.

What Are My Alternatives If I Do Not Want To Take Part In This Study?
The alternative is to not take part in the research study, and you may drop out at any time during the study.

**How Will I Know If New Information Is Learned That May Affect Whether I Am Willing To Stay In The Study?**

During the study, you will be updated about any new information that may affect whether you are willing to continue taking part in the study. If new information is learned that may affect you after the study or your follow-up is completed, you will be contacted.

**Will There Be Any Cost To Me To Take Part In This Study?**

There is no cost to participate in the study.

**Will I Be Paid To Take Part In This Study?**

You will not be paid to take part in this study.

**How Will Information About Me Be Kept Private Or Confidential?**

No one will be able to identify your individual responses to the research study. Your name and personal information will not be included in the study questions, results, or when using the app.

**What Will Happen If I Do Not Wish To Take Part In The Study Or If I Later Decide Not To Stay In The Study?**

It is your choice whether or not to take part in the research study. You may change your mind and drop out of the research study at any time. However, if you have already answered the questions in the research study, you will not be able to get the form back as we will not know which ones are yours.

There will be no penalty for not completing the study. Also, your relationship with the study staff or at [insert contact information] will not change.

**Who Can I Contact If I Have Questions?**

If you have questions about taking part in this study, or if you feel you may have suffered harm because of the research study, you can contact the Co-Investigator, Antoinette Cole at [insert contact information] or by email at [insert email]. You can also contact the Principal Investigator, Suzanne Willard, at [insert contact information] and [insert email].

If you have questions about your rights as a participant, you can contact the Rutgers IRB Director at: Newark HealthSci IRB, 65 Bergen St., SSB 511, Newark, NJ 07107, (973)-972-3608 or the Rutgers Human Subjects Protection Program at (973) 972-1149, email us at humansubjects@ored.rutgers.edu or write us at 65 Bergen St., Suite 507, Newark, NJ 07107.
Appendix G

Helper Pocket Cards

CARING FOR YOURSELF IN THE FACE OF DIFFICULT WORK
Our work can be overwhelming. Our challenge is to maintain our resilience so that we can keep doing the work with care, energy, and compassion.

10 things to do each day

1. Get enough sleep. 6. Focus on what you did well.
2. Get enough to eat. 7. Learn from your mistakes.
3. Vary the work that you do. 8. Share a private joke.
4. Do some light exercise. 9. Pray, meditate or relax.
5. Do something pleasurable. 10. Support a colleague.

For More Information see your supervisor or visit www.istss.org, www.proqol.org and www.compassionfatigue.org

FOCUSING YOUR EMPATHY
Your empathy for others helps you do your job. It is important to take good care of your feelings and thoughts by monitoring how you use them. The most resilient workers are those that know how to turn their feelings to work mode when they go on duty, but off-work mode when they go off duty. This is not denial; it is a coping strategy. It is a way they get maximum protection while working (feelings switched to work mode) and maximum support while resting (feelings switched off-work mode).

How to become better at switching between Work and Off-Work Modes

1. Make this a conscious process. Talk to yourself as you switch.
2. Use images that make you feel safe and protected (work-mode) or connected and cared for (non-work mode) to help you switch.
3. Develop rituals that help you switch as you start and stop work.
4. Breathe slowly and deeply to calm yourself when starting a tough job.
Appendix H

Recruitment Flyer

Participants Needed for Mindfulness Project
If you are 18 or older and are currently employed at Broadway House, you may be eligible to participate in a study exploring the effects of mindfulness on work-related stress levels.

Are You Eligible?
- Adults 18 and older
- Current healthcare worker employed at Broadway House
- Able to read and write in English

What you will be asked to do?
- Complete a 30-question survey at the start of the study.
- Estimated time for survey is 1 minute
- Use the mindfulness app that is provided, three times a week (Each session is 15 minutes)

Study Title:
“Combatting Compassion Fatigue: Caring for People Living with HIV”

The purpose of this study is to evaluate mindfulness as a way manage stress related to compassion fatigue. Compassion fatigue is a type of stress that may develop from taking care of patients. Mindfulness is set of strategies used to promote a healthy mind or mental health. It involves focusing your attention on your present feelings, moment, and environment. Mindfulness techniques have been proven to help with calming a person’s mood and controlling emotions.
• Following the last mindfulness session, complete the same 30 question survey that was given at the start of the study.

• A five-question survey will also be given two weeks after the study is completed.

• **Location:**
  
  o Recruitment sessions for the study held during an in-person luncheon at [Broadway House](298 Broadway, Newark, NJ 07104) or virtually via Webex. Lunch will be provided.

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If you would like to participate or have any questions, call or email a member of the study team:

Antoinette Cole
Co-Investigator

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Appendix I

Project Budget

<table>
<thead>
<tr>
<th>Expense</th>
<th>Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consents</td>
<td>$0.04 x 60 total</td>
<td>$2.40</td>
</tr>
<tr>
<td>Pre and Post -ProQOL surveys (black and white prints)</td>
<td>$0.04 x 40 total</td>
<td>$1.60</td>
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<tr>
<td>Annual subscription for the CALM app</td>
<td>$59.99 for one year</td>
<td>$59.99</td>
</tr>
<tr>
<td>In-person luncheon food</td>
<td>$100.00 x 2 total</td>
<td>$280.00</td>
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<tr>
<td>DNP project poster</td>
<td>$20.00</td>
<td>$20.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Budget:</strong> $363.99</td>
</tr>
</tbody>
</table>
Appendix J

Project Timeline

January 2020-May 2020
- Project Planning
  - Development of proposal
  - Site IRB submission
  - Present to team members project proposal

May 2020-August 2020
- Rutgers IRB submission
  - Submit to IRB
  - Make modifications to proposal
  - Await approval from IRB

September 2020-October 2020
- Implementation
  - Begin recruitment of subjects
  - Implement intervention over six weeks

November 2020
- Evaluate & Analyze Data
  - Collect Data
  - Begin Analysis
  - Evaluate Findings
  - Presentation
  - Final Presentation
  - Modify & finalize DNP paper
### Appendix K

**Psychometric Characteristics for the Summated Scale Scores**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Items</th>
<th>M</th>
<th>SD</th>
<th>Low</th>
<th>High</th>
<th>α</th>
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</thead>
<tbody>
<tr>
<td>Compassion Satisfaction</td>
<td>10</td>
<td>43.68</td>
<td>4.35</td>
<td>34.00</td>
<td>50.00</td>
<td>.67</td>
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<tr>
<td>Burnout</td>
<td>10</td>
<td>20.16</td>
<td>5.57</td>
<td>12.00</td>
<td>32.00</td>
<td>.75</td>
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<tr>
<td>Secondary Traumatic Stress</td>
<td>10</td>
<td>20.97</td>
<td>6.45</td>
<td>12.00</td>
<td>37.00</td>
<td>.81</td>
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</tbody>
</table>

*Note. N = 31.*

*a Interpretaion: 22 or less = Low; 23 to 41 = Moderate; 42 or more = High.*
Appendix L

Mann-Whitney Tests Comparing Pretest to Posttest Scores for Selected Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compassion Satisfaction Scale a</td>
<td>Pretest</td>
<td>26</td>
<td>42.96</td>
<td>4.22</td>
<td>2.24</td>
<td>.03</td>
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<tr>
<td></td>
<td>Posttest</td>
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<td>47.40</td>
<td>3.13</td>
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<tr>
<td>Burnout Scale a</td>
<td>Pretest</td>
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<td>20.58</td>
<td>5.59</td>
<td>1.03</td>
<td>.31</td>
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<td></td>
<td>Posttest</td>
<td>5</td>
<td>18.00</td>
<td>5.52</td>
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<td>Secondary Traumatic Stress Scale</td>
<td>Pretest</td>
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<td>21.58</td>
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<td>17.80</td>
<td>5.07</td>
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<tr>
<td>Item 6. I feel invigorated after</td>
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<td>3.62</td>
<td>1.13</td>
<td>2.67</td>
<td>.008</td>
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<tr>
<td>working with those I help. b</td>
<td>Posttest</td>
<td>5</td>
<td>5.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. N = 31.
a Interpretation: 22 or less = Low; 23 to 41 = Moderate; 42 or more = High.
b Ratings based on a five-point metric: 1 = Never to 5 = Very Often.
Appendix M

Post-Intervention Survey Responses

Calm App Use

- Technical Difficulties: 6%
- Wil continue to use: 25%
- Did Not Remember: 38%
- Busy: 25%
- Difficult to Navigate: 6%

Legend:
- Technical Difficulties
- Did Not Remember
- Busy
- Difficult to Navigate
- Wil continue to use