2016

Compassion Fatigue and Crisis Workers' Attitude to Work

Maria Adneza Loolo
Walden University

Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Maria Loolo

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Tina Jaeckle, Committee Chairperson, Human Services Faculty
Dr. Barbara Benoliel, Committee Member, Human Services Faculty
Dr. Sandra Harris, University Reviewer, Human Services Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2015

Abstract

Compassion Fatigue and Crisis Workers' Attitude to Work

by

Maria Adneza Loolo

MSC, University College, Dublin-Ireland, 2008

BA, University of Calabar, Nigeria, 1988

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Human Services

Walden University

November 2015

Abstract

Mental health practitioners experience challenging reactions in the course of their professional interactions with traumatized clients in the clinical work setting. The demands of caring that result from the depletion of practitioners' empathy and compassion in trauma-related work settings, without commensurate replenishment, produce forms of apathy and indifference towards the suffering of others, known as compassion fatigue. This exploratory, cross sectional study examined the predictive relationships between compassion fatigue and work attitudes in primary care physicians located in West Africa to ascertain how compassion fatigue affects the practitioners' dispositions to their daily work-related activities. The etiological model of compassion fatigue and constructivist self-development theory (CSDT) formed the conceptual framework for understanding clinician responses to trauma-related experiences in the clinical work environment. The main research question in this study was: How well does the level of compassion fatigue in practitioners predict their work attitudes in the clinical work setting? Data was collected from 67 primary care physicians using previously validated surveys and was analyzed using a linear regression modeling method. Results showed that practitioners' compassion fatigue was a statistically significant predictor of their work attitudes, $F(1,65) = 7.78$, $p < .05$, $R^2 = .107$. Results also confirmed that compassion satisfaction can moderate the effect of compassion fatigue in practitioners. This study provided primary care physicians with concrete information about compassion fatigue, and the need for effective self-care. Results can also influence the decisions of health leaders in developing countries to support training and welfare programs, as strategies to improve physicians' wellbeing.

Compassion Fatigue and Crisis Workers' Attitude to Work

by

Maria Adneza Loolo

MSC, University College, Dublin-Ireland, 2008

BA, University of Calabar-Nigeria, 1988

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Human Services

Walden University

November 2015

Dedication

I dedicate this study to my heavenly Father and loving children Immanuel, Victor, Edmund and Nethaneel, for all the support, provision and strength during this doctoral program. Indeed, we can do all things through Christ who gives us strength.

Acknowledgements

I sincerely thank everyone who directly or indirectly contributed to the successful completion of this study. My heartfelt gratitude goes to my committee, Dr. Tina Jaeckle and Dr. Barbara Benoliel for all the advice, guidance, patience and time. My committee's encouragement and support helped strengthen me for the huge task, and I am truly grateful!

My sincere appreciation goes to Dr. Sandra Harris for guidance and assistance in this dissertation journey. I also thank all my professors at the Human Services Department, Walden University for showing genuine kindness and giving support to students. I had adequate support in the course of this doctoral program, and I am very grateful for that.

TABLE OF CONTENTS

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Introduction

Researchers have shown that trauma discussed in therapeutic engagements can be transferred from traumatized clients to practitioners and possibly contribute to psychological distress and secondary traumatization (Harr, 2013; Newell & MacNeil, 2010). Trauma-related stress in clinical work-settings may accumulate over time. The resultant trauma may penetrate all aspects of practitioners' lives and result in compassion fatigue (Coetzee & Klopper, 2010). Studies have shown that the emotional impact of interactions with traumatized clients can lead to compassion fatigue (El-bar, Levy, Wald, & Biderman, 2013). A survey of 600 social workers who resided in New York City during the 2001 terrorist attacks revealed that practitioners who worked with traumatized clients had higher rates of compassion fatigue than other social workers (Boscarino, Figley, & Adams, 2004). Compassion fatigue is described as a state of tension experienced by practitioners when they become preoccupied with clients' traumatic situations (Newell & MacNeil, 2010). The tension may manifest in conditions of obvious or subtle indifference or apathy towards the suffering of others, which could lead to progressive disinclination in the ability to show empathy due to excessive exposure to traumatic situations (Lynch & Lobo, 2012; Musa & Hamid, 2008; Newell & MacNeil, 2010).

The stress and demands of caring for traumatized clients may produce psychological, physical, emotional, spiritual and social symptoms that can take huge tolls on practitioners' health when left unaddressed (Berzoff & Kita, 2010; Sprang, Craig, & Clark, 2011). Constant graphic accounts of trauma and suffering may bring emotional consequences in practitioners that could make them deprive clients of adequate compassion during clinical interactions (Donahue et al., 2012). Practitioners affected by compassion fatigue may experience symptoms similar to those of their traumatized clients. Those symptoms may include things such as psychic numbing, avoidance, irritability, and negative feelings towards life or significant relationships (Branson, Weigand, & Keller, 2013). In a web-based study of 1,199 board-certified physicians, researchers found that practitioners who experience compassion fatigue suffer serious personal distress and high levels of emotional pain similar to those of their clients (Gleichgerrcht & Decety, 2014).

Practitioners who may not have adequate information about compassion fatigue conditions and symptoms may be unaware of their compassion fatigue experiences (Figley, 2002; Gleichgerrcht & Decety, 2013). Compassion fatigue can occur when practitioners respond to cumulative experiences of caring for traumatized patients, especially when the demands overwhelm efforts to ameliorate clients' suffering (Berzoff & Kita, 2010). Ignorance of existing compassion fatigue presents the potential risk of practitioners cutting off empathic connections with their traumatized clients (Gleichgerrcht & Decety, 2013; James & Gilliland, 2013; Negash & Sahin, 2011).

Researchers have asserted that practitioners who are affected by compassion fatigue develop difficulties in maintaining psychological stability and mobility, and they may experience a diminished capacity for problem solving and efficacy in the clinical process (Eastwood & Ecklund, 2008; Severn, Searchfield, & Huggard, 2012). Further, the psychological overload associated with compassion fatigue may lead to reduced objectivity and decrease the practitioners' ability to be truly helpful (Radey & Figley, 2007; Shepard, 2013). As a result, practitioners who experience compassion fatigue in trauma-related clinical work settings may need support and practical self care plans to help maintain personal equilibrium and sustain work-related behaviors (Cieslak et al., 2013; James & Gilliland, 2013). Numerous studies have been conducted on the risks and challenges associated with compassion fatigue in helping professionals, especially as those risks and challenges relate to practitioners' wellness and life quality (Cieslak et al., 2013). However, researchers have not specifically addressed how compassion fatigue is related to work attitudes of practitioners working with traumatized clients in clinical work settings (Severn et al., 2012; Slocum-Goris, Hemsworth, Chan, Carson, & Kazanjian, 2013).

This study focused on how practitioners' experiences of compassion fatigue specifically impact their work attitudes in trauma-related clinical work settings. I focused beyond addressing relationships between compassion fatigue and work attitudes: I examined whether work attitudes can be predicted by compassion fatigue in practitioners. Results from the study may be used to enhance practitioners' knowledge regarding compassion fatigue and how compassion fatigue can impact their work-related behaviors.

Findings from the study could be used to advocate for the need to develop educational programs which focus on improving professionals' competence regarding the recognition, prevention, and management of compassion fatigue conditions. Such educational programs could be designed to promote individual wellness and effective client-practitioner interactions. I have sent an executive summary of this research to the health board responsible for the work-related issues of individuals who participated in the study. The research findings provided valuable information on the need for social and management support systems that should be implemented to improve practitioners' ability to manage compassion fatigue in the therapeutic work environment. Results from the study are important for informing members of the health board to develop programs and procedures for addressing the psychological and emotional welfare processes of practitioners in order to boost their wellness at work.

In Chapter 1 of this study, I discuss the background of the study, describe the research problem and explain the purpose of the study. In addition, the research questions, hypotheses, nature of the study and theoretical framework for the study are provided. I define important terms that were used in the study, and I discuss the significance of the research. Finally, I state the assumptions, limitations, and delimitations of the study.

Background

Helping professionals in the human services field who work in clinical settings are likely to extend therapy, treatment, and interventions to clients with serious physical, psychological, and emotionally traumatic challenges (Gleichgerrcht & Decety, 2013; James & Gilliland, 2013; Lynch & Lobo, 2012). Providing empathic care is essential to ethical obligations, and empathetic care is associated with improved client satisfaction in the helping relationship (Newell & MacNeil, 2010). The painful reality indicates that empathy in human services work may be

challenging as practitioners manage clients who experience severe, emotionally distressing situations and diverse forms of suffering. In turn, the client suffering could create psychological trauma in empathic helpers (Newell & MacNeil, 2010; Sprang, Craig, & Clark, 2011). De Figueiredo, Yetwin, Shever, Ralzik, and Iverson (2014), found that clinicians who treated intensively traumatized clients experienced emotional fatigue as a result of their reactions to the traumatic symptoms of clients. Zerech (2013) also found in a study of compassion fatigue among residential childcare workers in Israel that practitioners attributed their experiences of secondary trauma to emotional problems faced by at-risks youth under their care. Helping professionals working with traumatized clients may experience forms of emotional stress due to repeated exposure to traumatic material and the deep suffering of clients (Bhutani, Bhutani, Singh-Balhara, & Kaira, 2012; Gleichgerrcht & Decety, 2013; Newell & MacNeil, 2010).

Researchers have shown the negative effects that can occur in practitioners who have had prolonged engagement and exposure to traumatized clients who experience serious crisis situations (Bhutani et al., 2012; Gleichgerrcht & Decety, 2013). Studies have revealed that practitioners who work and extend services to clients going through crisis situations are more susceptible physically, mentally, emotionally, and psychologically to trauma at work (Negash & Sahin, 2011; Sprang et al., 2011). Practitioners who regularly treat clients' crisis situations are at risk of developing the traumatic, psychological condition of compassion fatigue that results in pathological practitioner-client relationships (Burtson & Stichler, 2010; Sprang et al., 2011).

Compassion fatigue may result in psychological, biological, and social dysfunction, as well as compassion stress in practitioners. These conditions could result in adverse effects on the practitioners' personal wellness and work setting interactions (James & Gilliland, 2013; Newell & MacNeil, 2010). The concept of compassion fatigue has received widespread attention recently due to the increased occupational stress associated with helping professionals in the work environment (Severn et al., 2012). Compassion fatigue has ethical implications, as practitioners are enjoined by professional principles to utilize beneficent approaches when working with clients at all times (Lynch & Lobo, 2012; Newell & MacNeil, 2010; Shepard, 2013). In the helping profession, the nature of client-practitioner relationships determines the moral space for ethical interactions (Shepard, 2013). Absence of effective engagements and genuine interconnections can create unplanned maleficent approaches to service delivery (Craig & Sprang, 2010). Van Dulmen and Bensing (2002) indicated that clients who perceived practitioners as distant and uncompassionate reported higher levels of anxiety and distress. Less empathic practitioners fail to build mutual trust and understanding with clients, creating challenges of distrust in the client-practitioner relationship (Derksen Bensing & Lagro-Janssen, 2012).

Although the helping professions are recognized as some of the most challenging professions with the highest probability of emotional fatigue, inadequate attention has been given to practitioners' mental health intricacies and support systems (Donahue et al., 2012; Harr, 2013; Sprang, Clark, Whitt- Woosley, 2007). As practitioners' mental stability and equilibrium are vital to successful therapeutic outcomes and to clients' healing processes, progressive research on issues regarding practitioners' vulnerabilities to secondary trauma in the course of work is required (Bhutani et al., 2012; Salston & Figley, 2003).

Empirical research may help increase essential sensitization about the challenges of affected practitioners, de-emphasize forms of associated stigmas, and eliminate any sense of inadequacy that can create barriers that prevent affected practitioners from seeking help when needed (Bearse, McMinn, Seegobin, & Free, 2013; Figley, 2002). Increased awareness of the consequences of secondary trauma may propel a sustainable paradigm shift in the work environment towards providing quality internal support that is devoid of backlash or prejudice, in order to enhance practitioners' effectiveness and wellness in their professional field (Burtson & Stichler, 2010; Harr, 2013).

Similarities have been drawn between compassion fatigue and other stress-related conditions such as burnout, vicarious traumatization, secondary traumatic stress, and countertransference (Newell & MacNeil, 2010). Most stress-related conditions are associated with forms of distress, and compassion fatigue conditions create covert or hidden resistance in affected practitioners, which undermines genuine engagement in the clinical setting (James & Gilliland, 2013; Lynch & Lobo, 2012). While scholars have suggested that compassion fatigue is a precursor to burnout (Coetzee & Klopper, 2010; Collin & Long, 2003; James & Gilliland, 2013), others have argued that burnout may be a strong predictor of compassion fatigue (Benoit, Veach, & Leroy, 2007; Lynch & Lobo, 2012; Newell & MacNeil, 2010). Others have found that compassion fatigue may result from the cumulative effect of both secondary traumatic stress and burnout experiences (Boscarino, Adams, & Figley, 2010). These scholars argue that compassion fatigue could present with both trauma-related symptoms that mirror the trauma of clients and physical exhaustion that comes with balancing administrative work with clinical work (Coetzee & Klopper, 2010; Newell & McNeil, 2010).

Statement of the Problem

Various studies have been conducted on the symptoms of compassion fatigue and how compassion fatigue may affect practitioners' quality of life and wellbeing (Collins & Long, 2003; Musa & Hamid, 2008; Slocum-Goris et al., 2013). In addition, researchers have examined relationships between the concept of compassion fatigue and related concepts such as burnout, secondary traumatic stress, countertransference, and vicarious traumatization, and the results have demonstrated positive correlations among the concepts (Cieslak et al., 2013). Other studies have shown inverse correlations between compassion fatigue and the concept of compassion satisfaction, which represents practitioners' derived pleasure from professional and work-related success (Slocum-Goris et al., 2013; Sprang et al., 2007). However, the extent to which compassion fatigue specifically impacts work attitudes of practitioners working with clients going through crisis situations have received minimal attention (Eastwood & Ecklund, 2008; O'Brien, 2006; Severn et al., 2012; Slocum-Goris et al., 2013). I could not locate any studies which have specifically examined how compassion fatigue directly impacts work attitudes of practitioners working with traumatized clients.

Despite the plethora of discussions on compassion fatigue, studies on compassion fatigue have mostly focused on the American geographical setting, and minimal research has been conducted in the developing world (Bhutani et al., 2012; Musa & Hamid, 2008). As a result, the compassion fatigue debate has not been adequately addressed in the traumatic crisis work settings in the Caribbean and Africa. The paucity of empirical research on the extent to which compassion fatigue specifically predicts practitioners' work attitudes in African trauma-related work settings has presented challenges of inadequate information about possible trauma consequences to practitioners.

Clinicians, clients and service providers may lack adequate knowledge about compassion fatigue and how it affects professional behaviors, psychological healing processes, and the quality of service delivery in the clinical setting. The issue of minimal knowledge about the effects of compassion fatigue on the work attitudes of practitioners in developing nations can exacerbate the problems related to compassion fatigue and practitioners' work behavior, and foster non-beneficent work behaviors in trauma work settings in Africa (Burtson & Stichler, 2010; Eastwood & Ecklund, 2008; Jack-Ide et al., 2013).

Purpose of the Study

The purpose of this quantitative, exploratory, cross-sectional study was to examine the impact of compassion fatigue on work attitudes of primary health care physicians in Nigeria's Delta communities. Compassion fatigue in this study was described as the psychological condition of numbness and obvious or subtle indifference towards the suffering of others, and the progressive disinclination in the ability to show empathy to others due to excessive exposure to traumatic situations (Collins & Long, 2003; Lynch & Lobo, 2012; Musa & Hamid, 2008; Newell & MacNeil, 2010).

By examining how compassion fatigue might affect work attitudes of practitioners, I was able to determine the extent to which participants' experiences of compassion fatigue could predict their work attitudes in the work setting. The results could be used to make empirical inferences and explanations regarding the phenomenon and the units of analysis (Creswell, 2013; Lutz & Hill, 2009). The study also controlled for the effects of compassion satisfaction, which is the positive aspect of trauma-related work, to provide a better understanding of the true effect of the independent variable (compassion fatigue) on the dependent variable (work attitudes) (Lutz & Hill, 2009). A cross-sectional survey design enabled me to examine study variables in the

absence of a treatment variable, in the bid to determine if there were significant connections between variables that were tested in the hypotheses associated with the research questions (Lutz & Hill, 2009; Yoshikawa, Weisner, Kalil, & Way, 2013).

In this study, compassion fatigue was investigated as the independent variable, and work attitude was tested as the dependent variable. The relationships between the independent variable and the dependent variable were tested. The main focus of the study was to determine if the independent variable was a statistically significant predictor of the dependent variable. Compassion satisfaction was entered in the regression analysis as a moderator variable to determine the true effect of the predictor variable on the outcome variable. Research questions and hypotheses for the study are presented below.

Research Questions and Hypotheses

Research Question 1: How well does the level of compassion fatigue in practitionerspredict their work attitudes in the clinical work setting?

$H_0$1: μ1= μ2 The level of compassion fatigue in practitioners, as measured by the Professional Quality of Life (ProQOL) scale, is not a statistically significant predictor of their work attitudes as measured by the Job Involvement Questionnaire (JIQ), in the clinical work setting.

$H_1$1: μ1≠ μ2 The level of compassion fatigue in practitioners, as measured by the Professional Quality of Life (ProQOL) scale, is a statistically significant predictor of their work attitudes as measured by the Job Involvement Questionnaire (JIQ) in the clinical work setting.

Research Question 2: What is the predictive relationship between practitioners' compassion fatigue and their work attitudes, while controlling for compassion satisfaction?

$H_0$2: μ1= μ2 There will be no statistically significant relationship between practitioners' compassion fatigue as measured by the Professional Quality of Life (ProQOL) scale and their

work attitudes as measured by the Job Involvement Questionnaire (JIQ), while controlling for compassion satisfaction.

$H_1 2$: $\mu 1 \neq \mu 2$ There will be a statistically significant relationship between practitioners' compassion fatigue as measured by the Professional Quality of Life (ProQOL) scale and their work attitudes as measured by the Job Involvement Questionnaire (JIQ), while controlling for compassion satisfaction.

Conceptual Framework

The conceptual frame work for the study was based upon the etiological model of compassion fatigue (Figley, 2002), and the constructivist self-development theory (McCann & Pearlman, 1990). The etiological model of compassion fatigue gave a basic explanation of the compassion fatigue concept. The CSDT provided a foundational description of how compassion fatigue may impact practitioners' work-related behaviors. Both theories were used to give theoretical underpinnings to this study.

The Etiological Model of Compassion Fatigue

The etiological model of compassion fatigue was developed by Charles Figley in 1995, and was used in this study to give underlying support to compassion fatigue (Figley, 2002). The model is based on the assumption that a combination of emotional energy and empathy provide a major driving force in working successfully with traumatized clients (Figley, 2002). Providing help to those who are suffering requires an empathic response, and effective therapeutic alliance between practitioners and clients (Figley, 2002). However, being empathic and compassionate involves costs to practitioners. The model outlines some variables that interact together to predict compassion fatigue in helping professionals who work in traumatic settings.

Interactions among variables such as prolonged exposure, disengagement, empathic concern, traumatic recollections, and compassion stress can result in compassion fatigue conditions (Figley, 2002). The model further postulates that practitioners who do not effectively manage personal compassion stress conditions in trauma work settings, are at greater risk of compassion fatigue. Also, prolonged exposure to the suffering of clients over a protracted time frame increases practitioners' risk of compassion fatigue (Figley, 2002). The etiological model proposes that practitioners' ability to consciously disengage from clients' traumatic suffering can help prevent the onset of compassion fatigue. The model is related to this present research as it provides a vital explanation about the development of compassion fatigue conditions in trauma-related settings. A detailed description of the model is presented in Chapter 2.

Constructivist Self-Development Theory

Constructivist Self- Development Theory was employed as the foundational base for explaining behavior of practitioners who may develop compassion fatigue in trauma-related work settings. The CSDT may be described as both a constructivist theory of personality development and a clinical trauma theory (Trippany, Kress & Wilcoxon, 2004). The theory was developed by Laurie Anne Pearlman and colleagues in 1990 (McCann & Pearlman, 1990). The theory describes how individual thinking and developmental patterns are affected by trauma-related events and settings (Frazier, 1992; Pearlman, 2013; Saakvitne, Tennen, & Affleck, 1998). The CSDT describes personality development as an interaction between individuals' constructed schemas and their core self-capacities that shape their personal perspectives and perceptions (Everly & Lating, 2004; Miller, Flores, & Pitcher, 2010).

The CSDT further highlights the conscious and unconscious developmental aspects of an individual that may be greatly affected by trauma-related experiences (Pearlman, 2013; Trippany et al., 2004). The theory is based on the premise that humans actively construct individual realities by creating cognitive perceptions to aid their understanding of personal experiences in the environment (Giller, Vermilyea & Steele, 2006). The CSDT also suggests that experiences in trauma-related settings can influence individuals' frame of reference and distort individuals' normal ways of comprehending themselves and their environment (Giller et al., 2006; Pearlman, 2013). The CDST is related to this investigation, as the theory describes how trauma-related experiences may influence individuals' thinking processes as well as affect their behavioral patterns and reactions in a given environment (Miller et al., 2010). The theory is further explained in Chapter 2.

Nature of the Study

I utilized a quantitative, cross-sectional survey design to examine the predicative relationships between the independent and dependent variables. I collected data at one point in time and used the results to form an empirical explanation of the phenomenon under study (Tacq, 2011). I gathered information from the participants through a survey methodology, and the data was transformed to numbers to enable quantitative interpretation in the data analysis (Smith, Fisher & Heath, 2011). As I examined a single group of participants to understand the phenomenon of interest, a cross-sectional survey design was appropriate for this study. I utilized both simple and multiple linear regression analyses to draw statistical inferences regarding how the independent variable affected the dependent variable, and I examined the effect of the control variable on the dependent variable (Field, 2011; Smith et al., 2011).

The independent variable in this study was compassion fatigue, and the dependent variable was the work attitudes of participants. Compassion satisfaction was used as a control variable to check the true impact that the independent variable had on the outcome variable. The survey also included a short section that gathered basic demographic information to describe the main characteristics of the participants. The data collection instruments consisted of Stamm's Professional Quality of Life Scale (PRoQOL), Version 5, for measuring compassion fatigue in helping professionals (Stamm, 2010), and Kanungo's Job Involvement Questionnaire (JIQ) for measuring practitioners' work attitudes regarding their jobs (Kanungo, 1982). Both instruments have good validity and reliability scores, and detailed explanations and justifications for my decision to use these tools are provided in Chapter 3.

This study was conducted in West Africa due to minimal research on compassion fatigue in developing countries (Bhutani et al., 2012). The results have contributed to the present knowledge base regarding compassion fatigue. Understanding how compassion fatigue specifically impacts work attitudes amongst practitioners provides opportunities for promoting the need for personal development, and training modifications that address the issue of compassion fatigue and how to manage it. Unveiling factual relationships between compassion fatigue and work attitudes also empowers practitioners with empirical information about compassion fatigue issues in trauma-related work settings. The target population for this study was physicians working in government-owned, primary healthcare centers in communities across Rivers State in Nigeria's Delta region.

Presently, there are 200 government-owned primary health centers in the state, out of which 161 have doctors. A total of 190 doctors are posted to the 161 health centers with doctors (Rivers State Ministry of Health [RSMOH], 2013). Sixty eight percent of the physician population is male, and 32% of the population is female (RSMOH, 2013). Health centers without doctors presently were not sent any questionnaires. I utilized a purposive sampling method to recruit participants for the study (Banerjee & Chaudhury, 2010; Creswell, 2013). Following successful data collection from participants, the data was entered into SPSS and analyzed using both simple and multiple linear regression analysis.

Simple linear regression was used to test the relationship between the independent variable and dependent variable and to statistically test the strength of the associations between variables (Green & Salkind, 2011; Field, 2009). Multiple linear regression was used to retest the strength of association between the predictor variable and outcome variable, while controlling for compassion satisfaction (Field, 2011). Previous studies have indicated that compassion satisfaction represents positive aspects of crisis work that can also affect practitioners' work behaviors (Linley & Joseph, 2007; Ray et al., 2013). As a result, the second model gave a clearer picture of the predictive relationship in the study and was able to 'determine the true influence of the independent variable on the dependent variable' (Creswell, 2013, p.53). The percentage of variance in the criterion variable accounted for by the independent variable was used to estimate the effect of compassion fatigue on work attitudes of the physicians (Field, 2011; Frankfort-Nachmias & Nachmias, 2008). Also, the observed statistical significance indicated whether the predictor variable which was compassion fatigue, made a significant contribution to predicting the outcome, which was the physicians' work attitude (Field, 2011; Lynch, 2012). Additional details of the study methodology are described in Chapter 3.

Definitions

Burnout: A defensive response to prolonged occupational strain and long-term engagement in demanding work situations such as heavy caseloads (Craig & Sprang, 2010; James & Gilliland, 2013; Yeh, Ko, Chang, & Chen, 2007).

Clinical work setting: The overall setting and prevailing atmosphere in the therapeutic environment where practitioners provide treatment and interventions for traumatized clients (Gleichgerrcht & Decety, 2013; James & Gilliland, 2013).

Compassion fatigue: A deep emotional, psychological, spiritual and physical weariness that may cause emotional pain and a sense of indifference to the suffering of others due to extensive exposure to indirect trauma or secondary traumatization (Coetzee & Klopper, 2010; Smith, 2007; Stamm, 2010).

Compassion satisfaction: The motivation and pleasure that practitioners may get from their ability to work effectively with clients despite challenges of traumatic situations (James & Gilliland, 2013; Severn et al., 2012; Stamm, 2010).

Crisis workers: Human services professionals who are trained and skilled in bringing intervention and support to individuals, families, and groups experiencing short-term or long-term physical, mental, and psychological traumatic challenges (James & Gilliland, 2013).

Practitioners: Human services personnel who practice in clinical and therapeutic work settings (Donahue et al., 2012; Negash & Sahin, 2011).

Primary traumatization: The psychological, emotional, and physical pain that can occur from direct contact with trauma filled events (James & Gilliland, 2013; Meadors et al., 2010).

Secondary traumatization: Traumatic experiences that result from indirect exposure to deep trauma, such as caring for individuals suffering from primary traumatization (Cieslak et al., 2013).

Vicarious trauma: A form of permanent transformation in practitioners' inner experiences following deep sharing in clients' lived traumatic experiences, and it results in practitioners' cognitive disruptions and negative change that mimics traumatic symptoms of clients (Branson et al., 2013; Meadors et al., 2010).

Work attitudes: Practitioners' degree of involvement with their work, and their dispositions to clients' needs in the clinical work setting (Kanungo, 1982; Yeh et al., 2007).

Assumptions

The study was based on certain assumptions, which included the assumption that the surveys gathered objective responses from participants that reflected honesty and truthfulness. It is important for participants to give truthful responses to avoid inaccurate inferences in the study (Bilsborrow & Henry, 2012; Robson, 2006). Failure to give honest responses by participants may lead to distortions in the assessment and outcomes of the study variables (Bilsborrow & Henry, 2012). Another assumption was that participants considered the issue of compassion fatigue as relevant to them, and genuinely participated in the research to gain vital knowledge about the condition.

It was assumed that the study was not subject to any form of researcher bias, as data gathered was based on standardized instruments, in order to establish objective results in line with quantitative approach (Beebe, Locke, Barnes, Davern, & Anderson, 2007). It was further assumed that the instruments which were utilized to collect data on the study variables accurately and reliably measured participants' compassion fatigue and work attitudes. There was also the assumption that participants in the study, worked and practiced in clinical work settings that served clients experiencing crisis situations.

The general assumptions of survey research also applied to this study. Survey research studies assume that participants' responses to survey questions present a good measure of the social behavior being tested (Williams, 1959). Survey responses represent scientifically legitimate data from which inferences may be drawn, regarding the phenomenon under study. It was further assumed that the language used in the survey instruments was simple and not beyond the understanding of participant physicians. Moreover, the survey instruments' Cronbach alpha scores for the study sample gave insight to reliability of the instruments in the present study. It was assumed that participants gave careful and objective answers to prevent response biases of socially desirable responding; careless responding; tendency to agree to survey questions; and tendency to choose extreme ratings from the choice range (Davern 2013; Robson, 2006).

Scope and Delimitations

This study focused on practitioners' compassion fatigue in relation to their work attitudes in the clinical work setting. The effect of compassion fatigue on practitioners' quality of life and interpersonal relationships outside the work environment was not investigated in this study. Also, practitioners' experiences of primary traumatization were not addressed in this study. The research specifically focused on practitioners' compassion fatigue and work attitudes

in the work environment to examine the predicative relationship between the variables. Compassion satisfaction was entered into the regression analysis as a control variable, so that the real impact of the predictor variable on the outcome variable could emerge. Information about basic demographic factors and burnout was retrieved from the frequency distribution analysis for descriptive explanations, but was not investigated in this present study. The scope of the research was further limited to primary care physicians working in government-owned, primary health care centers in communities across Rivers State in Nigeria's Delta region. Physicians in private practice and those outside the study location were not included in this study. Physicians in general hospitals and university teaching hospitals were also not included in this study.

The conceptual framework for this study was a combination of the etiological model of compassion fatigue, and the CSDT. The etiological model of compassion fatigue was used to describe the compassion fatigue construct. The CDST was used to provide explanations about how individuals' interconnectedness, and sharing processes while working with victims of trauma, could lead to secondary forms of trauma. The CDST was further used to explain how practitioners' perceived realities can affect their reactions in social settings. However, stress theory and trauma theory, which also provide explanations about individuals' thinking patterns and reactions to diverse forms of challenges, and give additional insight into aspects of traumatic experiences, were not covered by the study.

Limitations of the Study

There were several limitations in this study that may affect its generalizability. This study was limited to physicians who work in government-run primary health care centers in Nigeria's Delta region. Utilizing physicians from both government-owned and private care centers would have presented a better representative population of medical doctors. Selection-bias was also a limitation to this study, as participants were not recruited in a random manner, and actual participants may have certain characteristics that could affect the study outcome. However, the limited focus of the study implied that results from the study could only be generalized to the specific population and location of the research. Study participants may have responded to survey questions in a manner that support the way they think to be normal, instead of the way that reflects their real experiences. Social desirability bias promotes over-reporting of socially appropriate responses and under-reporting of socially undesirable behaviors (Beebe et al., 2007). Social desirability results in distortion of responses in surveys. Distorted responses can negatively affect the validity of the research, and it would be difficult to draw useful and meaningful inferences from results (Bilsborrow & Henry, 2012; Creswell, 2013).

The anonymous nature of the questionnaires that were used in this study may have helped to address the challenges of social desirability bias, to an extent. Participants were assured that their privacy and confidentiality were protected, to encourage more openness in participation (Beebe et al., 2007). Participants who did not return questionnaires generated non-response bias which reduced the sample size for the study. Non-response bias presents challenges to survey research, as non-respondents may be different from respondents regarding the study variables (Davern, 2013).

As a result, the study did not capture information about non-respondents which may be different from information gathered from respondents. This was reported as a possible limitation of study findings in this research. However, I endeavored to utilize a large percentage of the total population to capture many cases. I also utilized follow-up reminder strategies to persuade participants to respond, in order to increase the response rate, as needed.

Significance of the Study

This study on how compassion fatigue impacts work attitudes in practitioners who manage clients experiencing crisis situations, is important to diverse audiences. Participants received concrete information about the predictive relationships between compassion fatigue and work attitudes in trauma-related clinical settings. Results of the study may be used to advocate for the need for additional studies on compassion fatigue in African settings in an effort to promote widespread knowledge about the construct. Further, results could be used to promote the need for strategies and interventions for preventing, managing and treating compassion fatigue. These strategies and interventions could help empower practitioners with practical tools to enhance self-care, and promote social change. When practitioners are empowered with vital information about compassion fatigue challenges, they will be able to take practical steps to enhance personal wellness and improve work-related behaviors in trauma settings.

By presenting an executive copy of this study to the health board that oversees the participants' work-related issues, vital information about compassion fatigue was made available to policy makers. Information about how compassion fatigue impacts practitioners' work attitudes could prompt policy makers to take positive actions to improve practitioners' wellbeing at work. Results from the study could also be used to promote advocacy for modifications and enhancements of training programs and academic curricula of student

practitioners to include information about compassion fatigue and how to combat it. Furthermore, the study added to the body of knowledge on compassion fatigue in different ways. Findings gave information about compassion fatigue and work attitudes on the specific study group in the research location. The results presented conclusions that support some aspects of previous literature, and provided further support for past arguments about compassion fatigue. The research findings and interpretations also, differed from previous literature in some areas.

Summary

Research on compassion fatigue in trauma-related settings has witnessed significant increase in the human services field (James & Gilliland, 2013; Newell & MacNeil, 2010). Compassion fatigue may result from secondary forms of traumatization, and it can create a sense of helplessness and confusion in practitioners who work with trauma victims. The sense of helplessness and confusion in practitioners could lead to subtle or profound apathetic behaviors in the work environment (Coetzee & Klopper, 2010; Figley, 2002). Researchers have shown that there is a relationship between practitioners' empathy and the quality of care they provide to clients (Donahue et al., 2012; Gleichgerrcht & Decety, 2013; Radey & Figley, 2007). Detachment, instead of emotional engagement with clients, may protect practitioners from burnout and compassion fatigue (Branson et al., 2013). However, the detachment often results in negative consequences that could bring challenges to the healing process, and undermine the practitioner's professional ethical principles of beneficence (Harr, 2013; James & Gilliland, 2013).

Researchers on compassion fatigue have mostly concentrated on American and European settings and few investigations have been conducted in the developing countries (Bhutani et al., 2012; Musa & Hamid, 2008). The purpose of this quantitative, cross-sectional research was to investigate how compassion fatigue experiences might impact practitioners' work attitudes in the African clinical work setting. The etiological model of compassion fatigue, as well as the constructivist self-development theory (CSDT) provided the major theoretical underpinnings for explaining practitioners' reactions to secondary traumatic experiences in trauma-related therapeutic settings. By examining the relationships between compassion fatigue and work attitudes in practitioners, results from the study gave indications of the extent to which compassion fatigue could affect practitioners' work attitudes in the clinical work setting. The study focused on primary care physicians operating in government-owned, primary health care centers in communities across Rivers State in Nigeria's Delta region.

Chapter 2 provides an in-depth review of literature on the construct of compassion fatigue. The review includes literature on how the construct is measured and literature on underlying theories of compassion fatigue. Literature on the dependent variable, work attitudes are also reviewed with explanations that support the meaning of work and attitudes, regarding this study. I further synthesize existing literature that gives theoretical explanations about how compassion fatigue may affect work dispositions and behaviors in practitioners that provide clinical services to clients experiencing crisis situations.

Chapter 3 presents a detailed description of the research design and approach that I utilized in this study. The target population, instruments, operational definition of variables, and procedures for data collection, are also described. Further, the data analysis process, threats to validity and ethical issues regarding the study are presented.

Chapter 2: Literature Review

Introduction

Frontline practitioners in the clinical work setting provide direct care to clients who may experience complex physical, psychological, and mental health challenges that require extensive medical and therapeutic support (Potter, DeShields, Berger, Clark, & Olsen, 2013; Ray, Wong, White, & Heaslip, 2013). Researchers have shown that over time, the intense involvement with traumatized clients can lead to secondary traumatic experiences in practitioners, and those traumatic experiences have implications for the practitioner's work productivity and wellness (Adams, Boscarino, & Figley, 2006; Baum, Sharon, & Rahav, 2014; Harrowing, 2011). Practitioners' personal and professional qualities of compassion, empathy, and deep caring that produce effective therapeutic relationships, can be potentially rewarding and destructive at the same time, in traumatic work settings (Figley, 2002; Gleichgerrcht & Decety, 2013; Johnson, Bertschinger, Snell, & Wilson, 2014). According to James and Gilliland (2013), the deep empathy needed to effectively manage the emotionally challenging situations of traumatized clients makes practitioners vulnerable to emotional drain.

Previously, researchers have examined the prevalence of compassion fatigue and risks for developing the condition in practitioners working in trauma-related work-settings (Thompson, Amatea, & Thompson, 2014). Some researchers have further investigated the effects of compassion fatigue on practitioners' wellbeing and quality of life (Collins & Long, 2003; Slocum-Goris et al., 2013). However, there is minimal discussion on how compassion fatigue specifically predicts practitioners' work attitudes in the clinical work setting (Severn et al., 2012; Slocum-Goris et al., 2013). The construct has also been understudied in the developing countries (Bhutani, Bhutani, Singh- Balhara, & Kaira, 2012; Thompson et al., 2014).

The purpose of this study was to investigate the impact of practitioners' compassion fatigue experiences on their work attitudes in the African clinical work setting.The challenge of compassion fatigue creates severe costs to practitioners' personal and professional lives, to clients' therapeutic experiences, and to care-giving organizations (Austin et al., 2009; Corso, 2012; Harr, 2013; Negash & Sahin, 2011). Past researchers have shown higher rates of physical and psychological illnesses such as depression, anxiety and sleep disorders in practitioners who experience compassion fatigue (Gough, 2007; James & Gilliland, 2013; Kjellenberg, Nilsson, Daukantaite, & Cardena, 2013). Clients have also reported lower satisfaction with services provided in therapy that could be linked to practitioners affected by compassion fatigue and burnout (Austin et al., 2009; Ray et al., 2013).

In a study conducted in an oncology unit, researchers found that compassion fatigue decreased nurses' productivity in the workplace, and led to decreased patient satisfaction in the units (Potter, Deshields, Divanbeigi, & Berger, 2010).The service organizations which employ practitioners with compassion fatigue may notice higher turnover rates, absenteeism, and lower productivity in the affected practitioners (Newell & MacNeil, 2010; Sawatzky & Enns, 2012). Understanding how compassion fatigue affects practitioners' work attitudes may provide practitioners with useful information to decrease compassion fatigue and improve their empathic care at work.

In this chapter, I first present the strategy I used to locate literature related to this study. Next, I present the theoretical foundation for compassion fatigue as it applies to this study. Compassion fatigue is further reviewed regarding crisis practitioners and traumatic work settings. The literature review also presents some past investigations on the importance of work and work-related attitudes, in the work setting. Literature on the relationship between compassion fatigue and compassion satisfaction is reviewed, to give insight into levels of work-related pleasure exhibited by practitioners experiencing compassion fatigue.

Literature Search Strategy

The Walden University online library provided most of the peer- reviewed articles utilized for the literature review. The databases that I searched included: SocINDEX, PROQUEST, PsycARTICLES, PsycTESTS, PsycEXTRA, Education Resources Information Center (ERIC), Education Research Complete, Counseling and Psychotherapy Transcripts, PsycINFO, Psychology: A Sage Full Text Collection, PsycCRITIQUES, and eBook Collection (EBSCO HOST). I also accessed the National Institutes of Health's National Library of Medicine (NIH\NLM) online to gather free full- text scholarly articles published in PUBMED Central (PMC). The keywords I used for searching the literature included the following: *compassion fatigue, secondary trauma, stress, occupational hazard, attitudes, physicians, crisis workers, burnout, empathy, occupational stress, compassion satisfaction, work involvement,* and *traumatic stress*. I searched for foundational literature on compassion fatigue in articles that were published in the 1990s' as the construct was established during the period. However, more focus was placed on recent literature published within the last five years in order to explore current debates on the phenomenon under the study.

Conceptual Framework

The conceptual frame work for the study was based upon the etiological model of compassion fatigue (Figley, 2002) and the CSDT (McCann & Pearlman, 1990). The etiological model of compassion fatigue was used to give a basic explanation of the compassion fatigue concept. The CSDT provided a foundational description of how compassion fatigue may impact practitioners' work-related behaviors. Both theories were used to give theoretical underpinnings to this study.

Etiological Model of Compassion Fatigue

The concept of compassion fatigue was developed in response to the phenomenon of clinical helping professionals' reduced ability to effectively nurture clients, especially in the trauma work environment (Coetzee & Klopper, 2010). Compassion fatigue was originally introduced by Joinson (1992) who presented the concept as an expanded form of burnout that transcends environmental workplace stressors. Compassion fatigue uniquely includes physical and psychological stressors from clients' traumatic situations, which contribute to practitioners' trauma-related challenges in clinical work settings. Such trauma-related challenges may lead to a distinct and unique loss of nurturing ability in clinical practitioners, which could lead to psychological consequences for both clients and practitioners in the helping relationship (Bush, 2009; Ray et al, 2013). Some researchers have explained the concept as practitioners' loss of nurturing ability in the clinical setting (Bush, 2009; Gleichgerrcht & Decety, 2013; Lynch & Lobo, 2010), while others such as Figley equate compassion fatigue with secondary traumatic stress (Cieslak et al., 2013; Figley, 2002; Ray et al., 2013).

Compassion fatigue may be described as the end result of a cumulative and progressive stress process, owing to extensive exposure to clients' traumatic experiences (Gleichgerrcht & Decety, 2013; Lynch & Lobo, 2010). Compassion fatigue has been further depicted as a '*loss of self*', owing to practitioners' constant and continuous giving away of internal energy in intense empathic involvements and engagements without engaging in the commensurate restorative processes needed for maintaining a balanced equilibrium (Bush, 2009). In the absence of restorative measures, practitioners' interest and psychological capacity to bear the sufferings of clients in an unconditional and empathic manner become depleted (Coetzee & Klopper, 2010; Lynch & Lobo, 2010). The process leading to compassion fatigue starts with a condition of compassion discomfort, and progresses to a more severe state of compassion stress. Compassion stress that exceeds practitioners' threshold of emotional pain, and is not properly managed ultimately results in compassion fatigue (Gough, 2007; Harr, 2013).

The etiological model of compassion fatigue proposed by Figley (2002) as presented in Figure 1 exemplifies how practitioners' emotional energy and empathy could be stretched through prolonged exposure and engagement in trauma-related settings. The model shows that practitioners who are exposed to continuous suffering and trauma, and who respond with empathy, are at risk for compassion fatigue. The model highlights variables that interact in trauma-related settings to produce compassion fatigue experiences in affected practitioners. Practitioners' empathic abilities provide the fundamental aptitude for noticing the suffering of clients and for developing the empathic concern that motivates them to offer genuine assistance to clients (Figley, 2002).

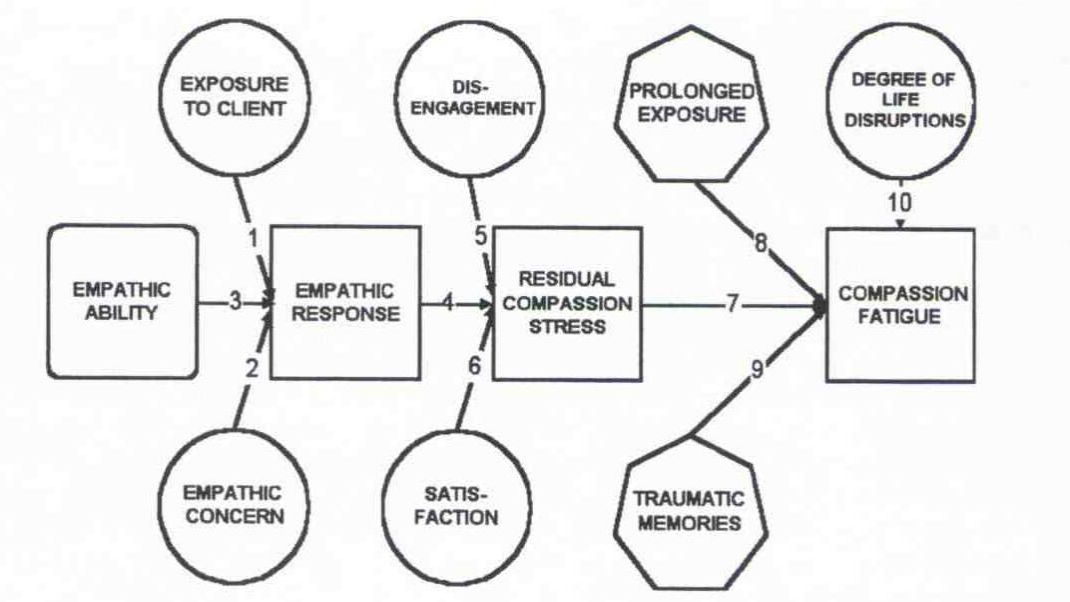


Figure 1: Figley's Compassion Stress and Fatigue Model (Figley, 2002, p. 1437).

Both empathic ability and empathetic concern are the keystones for providing empathic responses when practitioners are exposed to traumatized clients. Disengagement and satisfaction are factors that decrease susceptibility to compassion stress, and protect practitioners. Disengagement represents the extent to which practitioners can consciously and objectively distance themselves from their clients' deep pains, during the helping process. Practitioners' satisfaction with their efforts to help clients generates good sense of achievement which can also reduce susceptibility to compassion stress.

Compassion stress occurs in the on-going process of relieving clients' suffering, and can be prevented by practitioners' conscious disengagement effort, and satisfaction with the helping process. However, practitioners who may not be adequately equipped to manage the high stress of direct exposure to the trauma and sufferings of clients may develop compassion stress, which

represents the "residue of emotional energy from the empathic response" (Figley, 2002, p. 1437). In situations where compassion stress is unabated, continued prolonged exposure to secondary trauma may trigger more traumatic recollections and subsequently produce compassion fatigue (Boscarino et al., 2010; Figley, 2002). Practitioners' personal and professional life challenges such as family issues and sudden changes in job schedules may exacerbate the risks of compassion fatigue in vulnerable practitioners in the clinical work setting (Figley, 2002).

The Constructivist Self-Development Theory

Constructivist self-development theory integrates principles of psychoanalytical theories such as self-psychology, interpersonal psychiatry, and object relations, with constructivist, cognitive development, and social learning theories to explain human behaviors and responses to traumatic situations (Pearlman, 2013; Saakvitne, Tennen, & Affleck, 1998; Trippany, Kress, & Wilcoxon, 2004). The CSDT was developed by Laurie-Ann Pearlman and colleagues in 1990 (Frazier, 1992; Pearlman, 2013). The theory was presented as a framework for assessing and treating traumatized individuals (McCann & Pearlman, 1990). The theory focuses on the underlying causes of trauma-related experiences in affected individuals (Branson, Weigand, & Keller, 2013; Everly & Lating, 2004; Trippany et al., 2004) and how those experiences affect individual reactions and adaptations to a specific social context (Miller, Flores, Pitcher, 2010; Pearlman, 2013). The CDST also describes areas of the self that can be disrupted by traumatic experiences (Pearlman, 2013).

Individuals' reactions to trauma may be uniquely linked to the personality of affected persons, the physical and psychological resources available to individuals, and the unique needs of individuals (Everly & Lating, 2004; Trippany et al., 2004). In addition, the impact of trauma may be influenced by the social and cultural context of the external settings of individuals (Pearlman, 2013; Saakvitne et al., 1998). The CSDT asserts that individuals can use their ego resources and interpersonal skills to manage their responses to stress or trauma (Miller et al., 2010; Pearlman, 2013).

The CSDT posits that intense engagement with traumatized clients can cause long-term alterations in practitioners' own cognitive schemas, self-capacities, and imagery system of memory (McCann & Pearlman, 1990). Secondary trauma can bring disruptions to practitioners' cognitive schemas or mental frameworks in areas of trust, belief, assumptions, safety, control and intimacy (Dunkley & Whelan, 2006). Practitioners may begin to question their foundational beliefs and assumptions about life. Through their traumatized clients, practitioners are exposed to the painful impact of violations and betrayal of trust on human lives in the society. Practitioners' schemas about trust and safety can be distorted by their clients' horrific experiences of betrayal and violations (McCann & Pearlman, 1990). Long-term exposure to traumatic experiences of clients brings alterations to practitioners' imagery system of memory, through intrusive traumatic thoughts. Such alterations in practitioners' memory may become intrusive to their interpersonal and psychological functioning (Dunkley & Whelan, 2006).

Practitioners can experience their clients' traumatic imagery as flashbacks, intrusive thoughts or dreams (McCann & Pearlman, 1990). The CSDT suggests that clients' traumatic memories can become incorporated into the practitioner's memory system, leading to uncomfortable emotions of anxiety, anger or sadness (McCann & Pearlman, 1990). According to Dunkley and Whelan (2006), experiences of disturbing imagery and intrusive thoughts in practitioners lead to short or long-term defensive reactions, including distancing, numbing, and reduced empathy.

The CSDT further posits that practitioners' exposure to clients' trauma materials over time brings distortions to practitioners' self-capacities, and established sense of self (Trippany et al., 2004). Self-capacities represent inner capabilities that help individuals maintain consistent sense of identity, and connection to others (Trippany et al., 2004). Practitioners' experiences of secondary trauma can disrupt their self-capacities and create difficulties in interpersonal relationships (Dunkley & Whelan, 2006). Practitioners who experience loss of identity may also experience challenges with controlling negative emotions (McCann & Pearlman, 1990). Inability to manage negative emotions could bring work-related challenges to practitioners who serve traumatized clients. Distortions in self-capacities due to experiences of secondary trauma make affected practitioners to lose their self-confidence, and question their capabilities (Dunkley & Whelan, 2004). Disruptions to practitioners' self-capacities, imagery systems, and cognitive schemas can negatively affect the client-practitioner relationship, and practitioners' functioning in trauma work settings (McCann & Pearlman, 1990; Pearlman, 2013; Trippany et al., 2004). CSDT is relevant for this study because the theory provides perspective for understanding how secondary traumatization affects practitioners' sense of self, and their behaviors in trauma-related clinical settings.

The CSDT has been utilized in previous studies to explain practitioners' psychological challenges in traumatic work settings. Saakvitne et al. (1998) applied CSDT in an explorative study that focused on practitioners' ability to thrive in clinically traumatic conditions. Researchers found that disruptions to individuals' worldviews, particular identities, and belief systems were relative to their personal characteristics. Researchers also found that the gradual process of thriving in adversity involved individuals' readiness to 'pace their recovery', and rebuild shattered beliefs. Some participants shared that the negative shifts in beliefs they experienced due to clients' trauma, made them more realistic about life. Researchers concluded that changes in practitioners' thought patterns and schemas in trauma situations, are relative to individual characteristics, and represent forms of adaptations to recurrent traumatic materials.

The CSDT has also been used as foundational theory regarding practitioners' behavior in a number of settings. Results from an exploratory study about numbing experiences by Deiter-Sands and Pearlman (2009) showed that practitioners constructed individual narratives and created meanings for strong self-capacities that helped them thrive amidst constant trauma. Williams, Helm, and Clemens (2012) utilized CSDT to investigate the effects of individual and organizational factors on health therapists' experiences of vicarious trauma. The researchers applied the theory to provide information about how practitioners restructure and recreate their perceptions and realities based on stressful experiences in trauma-related work environment. The researchers further used CSDT to describe theoretical relationships between practitioners' personal wellness, workload, organizational factors, and experiences of secondary trauma (Williams et al., 2012). The CSDT asserts that individuals' ability to maintain strong self-capacities in terms of regulating self-esteem and tolerating strong affect is crucial for thriving in trauma (Pearlman, 2013). However, other researchers have suggested that such complex

adaptations may result in powerful physiological and psychological tensions that can promote personal challenges in interpersonal relationships (Branson et al., 2013).

The CSDT was applied to this study in relation to compassion fatigue and work attitudes in crisis workers. Exposure to trauma in clinical work settings can lead to secondary trauma in practitioners, and it can influence the client-practitioner relationship at work. As compassion fatigue results from practitioners' exposure to recurrent traumatic materials of clients (Gallagher, 2013), the CSDT gave insight into traumatic consequences that can occur in practitioner-client relationships. Secondary trauma that can be experienced by practitioners in the therapeutic relationship could lead to disruptions of practitioners' perceptions of reality. Such disruptions could create disorientation and challenges to practitioners' original belief system or worldview, and affect work behaviors and functionality (Pearlman, 2013; Saakvitne et al., 1998). Disruptions to self- capacities component through traumatic experiences could bring a loss of identity and difficulties in controlling negative emotions arising from the suffering of others (Everly & Lating, 2004). Disruptions to ego- resources could promote apathy, dilemma, and detachment from interpersonal relationships, with ethical implications in the work setting (Miller et al., 2010; Pearlman, 2013; Trippany et al., 2004). In addition, disruptions to cognitive schemas and psychological needs could create challenges to issues of trust, safety, intimacy, and sense of control needed for mental equilibrium (Saakvitne et al., 1998; Trippany et al., 2004). According to the theory, practitioners' susceptibility to compassion fatigue can create emotional challenges with pervasive and cumulative impact on work-related behaviors in the clinical setting (Miller et al., 2010; Trippany et al., 2004).

Compassion Fatigue Research and Measurement

Past research has shown that compassion fatigue is exacerbated by factors such as constant exposure to clients' traumatic stories, extensive stress in the work environment, and practitioners' minimal self-care skills (Cieslak et al., 2013). Compassion fatigue affects the cognitive, behavioral and emotional aspects of practitioners and may manifest in low concentration at work, apathy, detachment, depletion, depression, irritation, mood swings and anorexia (Berzoff & Kita, 2010). Killian (2008) conducted a mixed method study that focused on clinicians' secondary trauma and coping in their work with survivors of deep trauma. Using a cross-sectional survey of 104 clinicians, the researcher found that therapists' sense of powerlessness to alleviate clients' pain, past trauma history, work drain and emotional self-awareness, accounted for 54% of the variance in compassion fatigue. The researcher also found from the results of interviews that practitioners' further experienced trauma-related work stress beyond clinical hours. Yoder (2010) conducted a quantitative study that examined conditions that increased risk of compassion fatigue in clinical settings. A sample of 102 practitioners was used, and study results showed that practitioners who worked longer shifts in trauma units were more irritable, and at greater risk of compassion fatigue.

Perry, Toffner, Merrick, and Dalton (2011) conducted a qualitative study, and the results indicated that practitioners' inability to end patients' suffering compounded the practitioners' risks for compassion fatigue. Some studies have shown that practitioners' risk for compassion fatigue does not depend on their area of specialization in the care-giving field. Hooper, Craig, Janvrin, Wetsel, and Reimels (2010) conducted a study on 109 nurses, and found high risk of compassion fatigue in participants, regardless of nursing specialty. The quantitative study utilized a cross-sectional survey, and participants completed the Professional Quality of

Life Scale (ProQOL). Analysis of Variance (ANOVA) was used to determine differences in risk for compassion fatigue among nurses who worked in emergency care (n = 49), oncology (n = 12), nephrology (n = 16), and intensive care (n = 32). Researchers found no differences in the risk level for compassion fatigue among the nursing specialties examined in the study. Researchers concluded that participants were at risk for compassion fatigue, despite their different nursing specialties.

In an unrelated study, Bellolio et al. (2014) surveyed a total of 255 resident physicians with specializations in neurology, emergency medicine (EM), pediatrics, family medicine, orthopedics, general surgery, and obstetrics. The Professional Quality of Life Scale (ProQOL) and a demographic questionnaire were used to collect data. Multiple regression analysis was conducted to analyze the data. Results indicated that the number of exposures and the length of exposures significantly predicted compassion fatigue. Researchers concluded that physicians who had great exposure to traumatized patients for long periods of time were at high risks of compassion fatigue. The researchers further revealed that having child dependents significantly increased physicians' risk for compassion fatigue at work. Researchers concluded that individual life challenges such as the number of dependents practitioners have, further exacerbated risks of compassion fatigue in susceptible clinicians, more than their area of specialization.

Some scholars argue that compassion fatigue experiences bring adverse changes to practitioners that are pronounced or concealed from others, depending on self-care resources and support systems available to affected practitioners. Day and Anderson (2011) conducted a qualitative study on informal caregivers for family members with dementia. Interviews were used to collect data from 10 participants. Themes that emerged were hopelessness, helplessness,

emotional disengagement, apathy, and avoidance. Some participants shared about their hidden feelings of negative emotions such as shame and disgust, which they were embarrassed to admit. One participant likened her caregiving experience to a funeral that never ends. However, few participants expressed their unconditional love for their suffering family members, and accepted the distress they experienced as part of the care-giving process. Researchers concluded that caregivers of family members with dementia can experience feelings of helplessness and hopelessness during the caregiving process. Researchers further concluded that caregivers can be emotionally disengaged to their patients, but try to live in self-denial by concealing their negative emotions in the caregiving process. According to Figley (2002), practitioners may fail to seek for therapeutic help when needed, especially when there is tendency to endure the burdensome memories that can arise in the helping process.

Researchers assert that compassion fatigue symptoms comprise burnout and secondary traumatic stress experiences (Austin et al., 2009), with implications for practitioners both within and outside the workplace (Gough, 2007). In a qualitative study of registered nurses, researchers identified feelings of emotional emptiness, loss of balance, sleeplessness, and withdrawal syndromes as indicators of compassion fatigue in affected participants (Austin et al., 2009). Symptoms of intrusive thoughts, hyper-vigilance, depression, anxiety and mood swings may also occur (Figley, 2002; James & Gilliland, 2013; Ray et al., 2013).

Some standardized instruments have been developed to measure and determine the level of compassion fatigue in clinical practitioners involved in traumatic work settings. Instruments that measure compassion fatigue tend to be utilized as screening devices to provide awareness and information to affected practitioners for informed prevention and self-care measures (Bride et al, 2007; James & Gilliland, 2013; Stamm, 2010). Figley's compassion

fatigue self-test (CFST) was designed to assess both compassion fatigue and job burnout (Boscarino et al., 2010; Figley, 2002; James & Gilliland, 2013). The CFST was based on the practitioner-client experience of the developers, and includes 40 items with scores that can be classified as low, moderate, or high levels of compassion fatigue (Bride et al., 2007; Boscarino et al., 2010). Further work on the CFST by Figley and some colleagues produced a 66-item instrument that incorporated some positively oriented questions alongside the negatively oriented compassion fatigue questions (Stamm, 2010). Another version of the CFST, the compassion fatigue scale- revised (CFS-R), comprising 30 items, was developed by Gentry, Baronwosky and Dunning (2002). However, there have not been any reports on the validity and reliability of the CFS-R, and few studies have used the measure in research (Bride et al., 2007).

The professional quality of life scale (ProQOL) is a more widely utilized measurement for compassion fatigue that was particularly designed for practitioners who respond to crisis and emergency situations (Cieslak et al., 2013; Stamm, 2010). The ProQOL directly evolved from Figley's CFST (Boscarino et al., 2010; James & Gilliland, 2013; Potter et al, 2013; Ray et al., 2013). Researchers advise that it is vital for individuals taking the ProQOL test to understand the test results as part of their self-care plan in trauma-related work settings (Bride et al., 2007; Cieslak et al., 2013; Ray et al., 2013). Understanding that the test is non-diagnostic is important to promote informed participation and objective response to items on the scale (Bride et al., 2007). Researchers argue that due to the complex nature of compassion fatigue, no single measure captures all aspects of the concept, which may include cognitive distortions, trauma symptoms, burnout, and general psychological distress (Boscarino et al., 2010; James & Gilliland, 2013). Using more than one measure to assess the compassion fatigue construct may offer possible triangulation and deeper insight into practitioners' experiences of the condition.

However, I used the ProQOL scale to determine compassion fatigue levels within the time frame and limited resources available for this study.

Researchers have employed both qualitative and quantitative methods in exploring the compassion fatigue construct in clinical practitioners. In some qualitative studies, researchers mainly utilized interviews and focus group discussions to elicit crucial information from participants for detailed analyses and conclusions (Harr, 2013; Negash & Salin, 2011; Smith, 2007). Anandaraja and Roseman (2013) conducted a qualitative study to explore practicing physicians' views about compassion fatigue in medical practice. Using personal in-depth interviews, the researchers examined physicians' experiences of compassion fatigue. Many participants in the study shared personal emotional challenges which they experienced in their work. Researchers found that compassion fatigue among physicians is not uncommon, as physicians revealed personal experiences of emotional exhaustion at work. Researchers concluded that barriers to compassionate care included emotional pressures at work, and some organizational values that limited physicians' capacities in the work setting.

Menezes, Hodgson, Sahhar, and Metcalfe (2013) also conducted a qualitative study on compassion fatigue among medical and allied health professionals practicing in fetal medicine specialties in Australia. Data were collected using in-depth interviews. The participants expressed concerns about the emotional impact of working with clients who were suffering as a result of adverse pregnancy outcomes. Some participants shared their experiences of sleeplessness and feelings of anxiety over their clients' problems. Researchers concluded that health professionals providing care to couples at risk of fetal abnormality are vulnerable to compassion fatigue.

Researchers conducting quantitative studies on compassion fatigue have utilized cross-sectional surveys to examine interactions between compassion fatigue, compassion satisfaction and burnout experiences in practitioners. Most researchers have primarily used the ProQOL to measure compassion fatigue. Ray et al. (2013) conducted a quantitative study on frontline mental healthcare professionals (FMHPs) in Ontario, Canada. A total of 169 FMHPs who worked in a variety of roles such as psychology, nursing, social work, and psychiatry participated in the study. The ProQOL and a demographic questionnaire were used in the cross-sectional survey to determine relationships among compassion fatigue, burnout, compassion satisfaction, and work life condition. Pearson correlation and multiple regression were used for analysis in SPSS version 16.0. Results showed that compassion fatigue was negatively associated with satisfactory work life condition, while compassion satisfaction was positively associated with satisfactory life condition. Compassion fatigue was positively associated with burnout, while compassion satisfaction had negative correlations with burnout. Researchers concluded that satisfactory work life condition supported high levels of compassion satisfaction in helping professionals, and helped reduce risk for compassion fatigue.

Craig and Sprang (2010) examined relationships among compassion satisfaction, compassion fatigue, and burnout in trauma treatment therapists across the United States. The quantitative survey used the ProQOL scale and a demographic scale to investigate 532 participants. Multiple regression was used to determine associations between the study variables, as well as clinician factors that can affect compassion fatigue. Factors of age, years of experience, number of caseloads, and evidence-based practice were entered into the regression model. Results revealed significant positive relationships between compassion fatigue and burnout. Compassion satisfaction had negative associations with compassion fatigue and

burnout. Age and years of clinical experience did not significantly predict compassion fatigue. However, number of caseloads and use of evidence-based practice were significant predictors of compassion fatigue. Researchers concluded that increased caseloads in the clinical setting constituted high risk for compassion fatigue. In addition, utilization of evidence-based practices significantly decreased burnout and compassion fatigue.

Fernandez-Parsons, Rodriquez, and Goyal (2013) used a quantitative, cross-sectional design to assess the relationships between moral distress and compassion fatigue in emergency nurses. Results showed that participants who scored high in moral distress reported high levels of compassion fatigue. Researchers concluded that moral distress in trauma work settings significantly affected the participants' risk for compassion fatigue. A quantitative study conducted by Ariapooran (2014) focused on compassion fatigue and the role of social support. Using a cross-sectional survey design, the researcher sampled 173 participants from public hospitals in Malayar, Iran. Results indicated a high prevalence of compassion fatigue in Iranian nurses. In addition, the level of social support both in the home and at work was a significant predictor of compassion fatigue. Researchers concluded that some nurses, especially those in emergency care units, are at a high risk of compassion fatigue, and holistic support systems are necessary to manage compassion fatigue. In a quantitative cross-sectional survey conducted in Japan, anonymous questionnaires were distributed to 255 nurses and midwives working in childbirth and abortion services (Mizuno, Kinefuchi, Kimura, & Tsuda, 2013).

Mizuno et al. (2013) utilized the ProQOL measure and Emotional Work Scale to assess relationships between compassion fatigue, compassion satisfaction, and emotional work. Multiple regression analysis revealed that of all the tested variables, the display of negative emotions significantly predicted compassion fatigue in participants. Researchers concluded that providing abortion services was highly distressing for midwives and nurses owing to clients' suffering. Also, the traumatic emotions associated with experiences of distress exacerbated compassion fatigue.

Some researchers have adopted a mixed methods approach to investigate compassion fatigue in practitioners involved with crisis work. Perkins and Sprang (2013) examined compassion fatigue, burnout and compassion satisfaction in two groups of counselors who specialized in substance abuse treatment. Qualitative interviews were conducted with participants, and the ProQOL measure was also administered. About 50% of participants scored high on the compassion fatigue subscale. Two major themes of familial addiction history and difficulty with working with female clients emerged from the interview data of counselors with high compassion fatigue scores. Researchers concluded that working with women clients was more challenging, and that substance abuse counselors who had family members with addiction issues were more susceptible to compassion fatigue. Mason et al. (2014) also used both the ProQOL scale and in-depth interviews to collect data to examine relationships between compassion fatigue and moral distress in nurses. Results showed average levels of compassion fatigue in participants. However, the qualitative themes that emerged centered on serious moral distress due to conflict with organizational values, patients' suffering, and death. Researchers concluded that despite average scores on compassion fatigue scales, moral distress was a serious clinical issue that could affect compassion fatigue.

Compassion Fatigue in Physicians

Primary care physicians provide fundamental medical care to clients with a range of medical, psychosocial, and mental health problems (Gross, Rabinowitz, Feldman, & Boerma, 1996; Loeb, Bayliss, Binswanger, Candrian, & Degruy, 2012). Due to an inadequate number of qualified mental health specialists and social workers in developing countries, physicians in general practice attend to clients who experience all manners of crisis conditions (Ae- Ngibise et al., 2010; Bhana, Petersen, Baillie, & Flisher, 2010). Studies on compassion fatigue in physicians indicate that exposure to clients' traumatic stories place physicians at an increased risk of being affected adversely by those stories (Anagnostopoulos et al., 2012; Driver, 1997). Scholars have argued that medical education equips physicians with the ability to treat clients without being emotionally engaged (Passalacqua & Segrin, 2010). However, studies have also revealed the prevalence of professional distress and diminished altruistic attitudes in some physicians who experience work- related stress (Anagnostopoulos et al., 2012; Driver, 1997; Hayashino, Utsugi-Ozaki, Feldman, & Fukuhara, 2012).

In a quantitative study of 194 family physicians, researchers used the anonymous compassion satisfaction and fatigue test questionnaire (CSFT) to measure compassion fatigue, burnout, and compassion satisfaction in participants (El-bar, Levy, Wald, & Biderman, 2013). Results indicated that 46.1% of physicians scored extremely high for compassion fatigue. Increased risk for compassion fatigue was also associated with emotional trauma at work. Researchers concluded that family physicians in the study were at a greater risk for compassion fatigue in trauma-related work settings.

Bhutani et al. (2013) conducted a quantitative study among physicians practicing in Haryana, India. A total of 60 practitioners in different clinical settings participated in the study. The main focus of the study was to investigate the prevalence of compassion fatigue among physicians in the study location. The ProQOL scale and a demographic questionnaire were administered to participants, and data was analyzed using SPSS. Pearson's correlation was used to determine correlations between study variables. Independent *t* test was conducted for comparison between groups. Results revealed the prevalence of compassion fatigue among study participants. Respondents who reported poor working conditions had higher compassion fatigue levels. Participants who were employed by the government were at greater risk of compassion fatigue, than private practitioners. Researchers concluded that despite risk for compassion fatigue, ensuring better working conditions can help reduce compassion fatigue in clinicians.

Handford, Lemon, Grimm, and Vollmer-Conna (2013) conducted a qualitative study on physician empathy and found that clinical practice presented great opportunities for practitioners to develop empathy, despite training on emotional detachment as a self-protecting measure. The researchers concluded that clinical exposure was instrumental to the physicians' emotional connections with their clients, and that the client-practitioner relationship affects physicians. However, some participants' revealed that their exposure to clients' experiences in clinical practice and their sense of empathy for clients, increased their risk for compassion fatigue. Other studies on board certified physicians have indicated that high levels of personal distress from work-related trauma when combined with minimal self-care practice produce compassion fatigue symptoms (Linzer et al., 2002; Loeb et al., 2012).

Several researchers have reported the psychological and emotional toll that compassion fatigue has on physicians. Some physicians have reported symptoms of compassion fatigue including avoidance, helplessness, dysfunction and emotional exhaustion, which they have attributed to the clinical practice (Neumann, Edelhauser, Tauschel, Fischer, & Wirtz, 2011). In an online study of 7,584 physicians, Gleichgerrcht and Decety (2013) found that physicians with high levels of compassion fatigue reported feelings of alexithymia, which represents a feeling of emotional numbness. Participants also reported self-oriented negative emotions resulting from witnessing clients' experiences of distress (Gleichgerrcht & Decety, 2013). Researchers have further shown that physicians who experienced the loss of a client also experienced high levels of compassion fatigue in the clinical work setting (Loeb et al., 2012; Meadors et al., 2010). In separate qualitative studies, Boyle (2011) and Driver (1997) reported narratives of affected physicians who shared experiences of suicidal thoughts, schizophrenia, and deep depression following the events of a clients' death or suicide.

The following section gives explanations about the dependent variable, work attitude. Work attitude presents a complex construct, as it comprises two different dimensions to its content domain. Descriptions of work and attitude are presented to give insight to the meaning of work attitudes, in this study.

Work and Attitudes

The study of work attitudes is complex as merging the two constructs of work and attitudes may present some difficulties to a clear and concise definition of work attitudes (Boer & Fischer, 2013; Kanungo, 1982). No consensus has been reached on a universal description of work attitudes, and some researchers utilize the term interchangeably with job satisfaction

(Barret, 2013; Mauno, Kiuru, & Kinnunen, 2011). Other researchers may view work attitudes as workers' commitment (De- Janasz, Forret, Haack, & Jonsen, 2013), or involvement with their job (Kanungo, 1982; Johnson, Hong, Groth, & Parker, 2011). In this study, I explained the meaning of work and attitudes, to give an understanding of work attitudes in the research.

The Meaning of Work

Researchers have studied the significance of work in the lives of individuals in the society (Stout, Germine, & Guzman, 2013). Findings have indicated that work is a vital part of life that provides stability, boosts self-esteem, and enables integration in society (Lu, Kao, Siu, Lu, 2011; Sidani & Jamali, 2010). Work has been described as an intrinsically satisfying activity that leads to self-actualization and enhances individuals' sense of moral responsibility (Barret, 2013). Having a sense of moral responsibility towards clients helps practitioners to place high value on their work, and foster compassionate helping behaviors (Slusss & Ashforth, 2007). In addition, placing high value on personal work has the tendency to increase feelings of compassion and social connection (Lindsay & Creswell, 2014). Further, work can provide a good foundation for engaging in positive interpersonal relations with others and achieving some degree of happiness (Stout et al., 2013). Some scholars have suggested that work can be psychologically and physically burdensome to workers in challenging situations (Lima, 2012). However, researchers maintain that despite stressful conditions that may accompany work, work remains a fulfilling activity that can meaningfully occupy a person's time and provide the means for meeting the person's economic needs (Lu et al., 2011; Mauno et al., 2011; Kuchinke, Cornachione, Oh, & Khang, 2010).

Work may be explained from the primary domains of work centrality, work role identification and work norms, to determine work attitudes (Mauno et al., 2011). Work centrality refers to the degree of importance that work has in a person's life (Sharabi & Harpaz, 2010). Work centrality further represents beliefs regarding the importance and the role that work plays in the lives of people. Diefendorff, Brown, Kamin, and Lord (2002) conducted a study on work centrality and job attitudes. A total of 130 employees of an urban firm participated in the quantitative study. Work centrality was measured using a 12-item scale developed by Paulley etal. (1994). The Job Involvement Scale developed by Paulley et al. (1994) was used to gather information about participants' work attitudes. Pearson correlation showed that work centrality and job attitudes were positively correlated ($r = 0.34$, $p < 0.001$). Researchers concluded that people who see work as being central to their lives are more likely to exhibit positive attitudes at work. The importance placed on work when compared to other aspects of life such as family, leisure, community or religion determines the centrality and outcome of work in the individual's life (Barret, 2013; Lima, 2012).

Work role identification is described as the extent to which individuals associate themselves with their duties. Individuals who accept and identify with their work roles portray high levels of positive affect for the job (Sharabi & Harpaz, 2010). Sluss and Ashforth (2007) conducted a study on employees of a Fortune 200 financial services corporation. Interviews were conducted to gather information about participants' perceptions of their role identity at work. Results revealed that most participants identified and accepted their job roles.

However, identifying with work roles did not determine participants' general commitment to work. Researchers concluded that work role identification did not by itself, determine commitment to work. Some scholars argue that role identification has been associated with the extent to which roles address psychological needs of individuals (Dimatteo, 1998). Practitioners play vital roles in ensuring the wellness of their clients. Given the central role of trust in the client-practitioner relationship, proper work role identification and acceptance can promote functionality (Dimatteo, 1998).

Work norms represent the ground rules in the work environment that encourage acceptable behaviors at work (Sharabi & Harpaz, 2010). Work norms refer to the unwritten rules that guide behavior in specific work settings (Argote, 1989). In the helping profession, ethical codes and principles provide guidance and standards of acceptable work behaviors to help protect client-practitioner relationships (James & Gilliland, 2013). Research indicates that established work norms affect work attitudes, and increase job effectiveness at work (Dimatteo, 1998). Argote (1989) conducted a study on the relationship between work norms and effectiveness of hospital emergency units. Participants included 248 emergency unit physicians, 278 nurses, and 215 hospital physicians recruited from 30 hospitals across six Midwestern states. Interview questionnaires were distributed to participants to gather information about their understanding of hospital work norms. Archival data from hospital records were also used for the study, to help assess activities at the emergency units. Results showed that understanding of hospital work norms, and adherence to the norms influenced effectiveness at the hospital emergency units. Researchers concluded that work-related norms increased the likelihood of certain positive employee behaviors, and influenced effectiveness at work.

Work-related values mirror individuals' cultural, environmental, and socio-economic orientations (Beauregard, 2011; Lu et al., 2011). Results from some studies have shown that a significant number of individuals in collectivist cultures in East Asia rank work as the most dominant concern in life (Kuchinke et al., 2010; Lu et al., 2011). However, in some other cultures, work is ranked the second most dominant factor, after family (Beauregard, 2011; Sidani & Jamali, 2010). Scholars have asserted that work is more meaningful to individuals who place a high value in work, and these individuals exhibit increased engagement with work (Stout et al., 2013). Though work value is considered to represent cultural orientations, some scholars suggest that the personal values and belief systems of individuals are crucial to individuals' work values (Barret, 2013; Fossen & Vredenburgh, 2014; Lima, 2012). Scholars have argued that individuals' belief systems define their world to them and guide behaviors and attitudes in a particular context (Sidani & Jamali, 2010). Interactions between individuals' belief systems, cultural values, and professional ethics may produce a more holistic understanding of work for most workers (Fossen & Vredenburgh, 2014; Johnson et al., 2011; Sidani & Jamali, 2010).

In the helping profession, the dignity and social worth of clients are important, and practitioners are expected to hold high work-related values that may promote proper commitment and involvement with the needs of clients (Johnson et al., 2011; Mauno et al., 2011). Reseachers, however have shown that stress-induced dissatisfaction in the work domain can deplete an individual's interest and energy and result in considerable loss to personal and professional efficiency (Kuchinke et al., 2010; Lu et al., 2011). High degree of work commitment can help reduce the effects of negative work- related outcomes, and mitigate the risk for stress at work (Beauregard, 2011; Johnson et al., 2011).

The Meaning of Attitudes

Attitudes have been described as individuals' dispositions to social objects and ecological settings (Ajzen, 2001). Attitudes may be further described as a form of mental arrangement that develops from certain experiences (Biggs et al., 2014). Certain actions and inactions of individuals are also conditioned by their attitudes in specific situations (Costanza et al., 2012). Some scholars assert that attitudes integrate cognitive and affective dimensions to represent a range of actions and relationships of individuals with others (Ajzen, 2001; Costanza, Badger, Fraser, Severt, & Gade, 2012). Other scholars argue that attitudes may result from an implicit drive and existing stimuli that motivate individuals into displaying outward behaviors and actions (Biggs, Brough, & Borbour, 2014; De- Janasz et al., 2013).

Individuals' reactions to situations, objects, and persons emanate from a blend of their feelings, beliefs, and outward actions (Fazio, 2007; Yildrim & Cam, 2012). As a result, attitudes may involve evidence of consistent behavioral and verbal responses to certain situations, persons, or processes in specific contextual situations (Ajzen, 2001; Johnson et al., 2011). Some past debates have portrayed the construct in a hypothetical manner (Fazio, 2007), but more recent scholars have argued that attitudes may exert strong influence on behavior and judgment by prompting attitudinally consistent behavioral reactions and responses (Boer & Fischer, 2013; Yildrim & Cam, 2012). Scholars further argue that attitudes bring bias to interpretations and construal of objects, and determine outcomes and actions of individuals (Ajzen, 2001; Biggs, Brough, & Borbour, 2014; Boer & Fischer, 2013).

Researchers conducting studies on work-related attitudes have focused mainly on workers' level of job satisfaction, organizational commitment, or job involvement and

engagement (Brown & Leigh, 1996; Costanza et al., 2012; Stout et al., 2013). Wegge, Schmidt, Parkes, and Van Dick (2007) conducted a study on absenteeism and the work attitudes of job satisfaction, organizational commitment, and job involvement. Researchers proposed that the three major aspects of work attitudes would yield new insights into the complex function of work attitude. A total of 498 employees of a large civil service organization in Germany participated in the study. Questionnaires included job satisfaction, job involvement, and organizational commitment measures. Archival documents were used to determine absence frequency and time lost. Multiple regression was used to analyze data. Regressing the work attitude variables onto absenteeism variables resulted in $R^2 = 0.44$ for absence frequency, and $R^2 = .026$ for absence time lost. Relationship between work attitudes of job involvement and job satisfaction was moderate ($R^2 = .39$). Researchers concluded that absenteeism at work is affected by the combination of work attitudes of job satisfaction, job involvement, and organizational commitment.

In an unrelated study, Latham and Leddy (1987) investigated the source of recruitment and employee work attitudes of job involvement, organizational commitment, and job satisfaction. A total of 68 employees in two large Midwestern cities participated in the study. Data was collected through questionnaires that were administered to participants at work. Source of recruitment was measured based on participants' self-reports on identified sources of recruitment in the questionnaire. The three attitudinal measures included Kanungo (1982) Job Involvement Scale; Porter et al. (1974)'s Organizational Commitment Scale; and a job satisfaction scale developed by the researchers. A multivariate analysis of variance (MANOVA) was utilized for the analysis. Results showed significant relationships between recruiting sources

and each of the work attitudes. Employees recruited through referrals indicated significantly higher levels of job involvement, job satisfaction, and organizational commitment. Researchers concluded that employee work attitude is influenced by the source of recruitment.

Although the constructs of job satisfaction, job involvement, and organizational commitment are positively correlated and sometimes used interchangeably, there are distinctions between and amongst them (Cropanzano, Rupp, & Byrne, 2003). Organizational commitment involves workers' attachment to remain in the employment of their organizations (Biggs et al., 2014; Cropanzano et al., 2003). Job satisfaction represents workers' positive emotional state in connection to their jobs (Yeh, Ko, Chang, & Chen, 2007). Job involvement however, represents both workers' psychological identification and actual engagement with their work (Kanungo, 1982; Singh & Sarker, 2012). For the purpose of the present study, I focused on work-related attitudes in terms of practitioners' job involvement in the clinical setting.

Compassion Fatigue, Compassion Satisfaction, and Work Attitudes

Researchers have established that work-related trauma can bring stressors to practitioners and result in adverse consequences for practitioners' professional and personal wellbeing (Bearse et al., 2013; Collins & Long, 2003). Practitioners' experiences of psychological strain at work may affect work-related outcomes, such as job performance, in traumatic clinical settings (Voss-Horrell et al., 2011; Yan & Beder, 2013). Although psychological distress in traumatic work settings is not indicative of psychiatric dysfunction (Cieslak et al., 2013; James & Gilliland, 2013), some researchers have posited that the absence of self-care measures can create high risks of job-related neurasthenia which may result in practitioners' disengagement at work (Aycock & Boyle, 2009; Bearse et al., 2013).

Researchers have also shown that forms of secondary trauma are associated with some negative responses to work such as low job commitment and job dissatisfaction (Maslach & Leiter, 2008). Other research results have indicated that clients of practitioners who experience stress-related conditions are more likely to report low satisfaction with service delivery (Fetter, 2012; Ray et al., 2013). In some studies, researchers found that work-related stressors such as compassion fatigue caused changes in job performance, increased number of mistakes at work, and high turnover rates (Austin et al., 2009; Corso, 2012; Potter et al., 2013). Another study on compassion fatigue in child welfare workers reported high turnover rates and ineffective engagements with work responsibilities in affected practitioners (Van Hook & Rothenberg, 2009).

Despite the adverse work-related consequences of practitioners' secondary traumatic experiences in clinical settings, scholars have noted the possibilities of stress-related growth (Donahue et al., 2012; James & Gilliland, 2013). Results from several studies showed that compassion satisfaction, which describes the pleasure that practitioners derive from their work, may present an effective buffer against compassion fatigue in clinicians (Alkema et al., 2008; Gleichgerrcht & Decety, 2013; Jacobson, 2012; James & Gilliland, 2013). Compassion satisfaction unfolds from the emotional rewards of providing empathic care in the clinical work setting. Data from most studies have demonstrated inverse correlations between compassion satisfaction and compassion fatigue, as practitioners who are satisfied with the effect they have on clients often display low levels of compassion fatigue (Craig & Sprang, 2010; Slocum-Goris et al., 2013; Sodeke- Gregson et al., 2013; Sprang et al., 2007; Yan & Beder, 2013).

Compassion satisfaction may have moderating effects on relationships between workplace compassion fatigue and practitioners' work behaviors (Aycock & Boyle, 2009; Boyle, 2011; James & Gilliland, 2013).

Researchers show that compassion satisfaction can be enhanced through specialized training of practitioners in self-care and capacity development activities, to help reduce work challenges associated with compassion fatigue (Corso, 2012; Slocum-Goris et al., 2013; Sprang et al., 2007). Slocum-Goris et al. (2013) conducted a quantitative study to understand the complex relationships among compassion satisfaction, compassion fatigue, and burnout within the palliative care and hospice workforce. The study further sought to explore how key practice features of professional affiliation, training, and practice status interact with the study constructs. A total number of 630 hospice workers were surveyed across the country. The ProQOL Scale and a demographic questionnaire were used to gather information for the study. Pearson correlation was used to analyze data. Results revealed significant negative correlation between compassion satisfaction and burnout (r = -0.531, p < 0.001), and between compassion satisfaction and compassion fatigue (r = -0.208, p < 0.001). There was significant positive correlation between compassion fatigue and burnout (r = 0.532, p < 0.001). Results further revealed that compassion fatigue, compassion satisfaction, and burnout are affected by professional affiliation, training, and practice status. Researchers concluded that health care systems can promote compassion satisfaction through institutional level programs, and self-care education to help support practitioners' wellness.

Corso (2012) conducted a qualitative study on developing compassion satisfaction to counter compassion fatigue experiences at work. The interview tool was used to gather

information from oncology nurses, about their personal reflections and experiences of compassion satisfaction at work. The major themes of compassion identity, self-care practice, debriefing, and training represented some strategies utilized by participants to help sustain compassion identity at work, and reduce compassion fatigue experiences. Researchers concluded that effective self-care practice, professional education, psychotherapy, and perceiving oneself as being compassionate can help promote compassion satisfaction to manage compassion fatigue.

Practitioners who experience work-related trauma may develop diminished motivation and empathy for clients in the clinical work setting (Cieslak et al., 2013; Neumann et al., 2011). Developing compassion satisfaction may help reduce feelings of apathy. Compassion satisfaction can be achieved through a good organizational culture that provides vital resources to control stress and empower employees (Cicognani, Pietrantoni, Palestini, & Prati, 2009; O'Brien, 2006; Williams et al., 2012). Ray et al. (2013) conducted a study of frontline mental healthcare workers. The study used a quantitative, non-experimental, survey design of 430 participants to examine relationships between compassion satisfaction, compassion fatigue, and work life conditions. Results of ANOVA analysis showed negative relationships between compassion satisfaction and compassion fatigue. Participants with higher levels of compassion satisfaction recorded lower levels of compassion fatigue. Health workers who scored higher levels of compassion fatigue also had moderate to low levels of compassion satisfaction. Researchers concluded that compassion satisfaction acted as a protective factor for compassion fatigue. The researchers further asserted that a strong understanding of compassion satisfaction was essential in order for workers to effectively manage compassion fatigue conditions.

Jacobson (2012) utilized a quantitative, cross-sectional, one-group survey design to assess the risk of compassion fatigue and potential for compassion satisfaction among a national sample of Employee Assistance Program (EAP) professionals who provide mental health services to adults within the workforce. Results from the study indicated moderate levels of compassion fatigue and high levels of compassion satisfaction in participants. Researchers concluded that compassion satisfaction was a potential buffer for compassion fatigue for professionals working with traumatized clients. Linley and Joseph (2007) explored both the negative and positive aspects of therapists' wellbeing. The cross-sectional research surveyed 400 participants. Data was collected using mailed questionnaires. One hundred and fifty-six completed questionnaires were returned and used for the data analysis. Results showed that participants who reported greater levels of compassion satisfaction had less compassion fatigue. Researchers concluded that compassion satisfaction promoted positive well-being in the therapists and reduced compassion fatigue, and compassions satisfaction should be cultivated.

Alkema et al. (2008) conducted a quantitative study to examine the relationships between compassion fatigue, self-care, compassion satisfaction, and burnout. Results showed a significant relationship between self-care strategies and lower levels of compassion fatigue and burnout. Self-care strategies were positively correlated with higher levels of compassion satisfaction. Negative correlations were reported between compassion satisfaction and compassion fatigue. Researchers concluded that self-care strategies increased the prevalence of compassion satisfaction, and high levels of compassion satisfaction protected participants against compassion fatigue.

Scholars have asserted that Compassion satisfaction is a motivating factor for practical commitment to professional activities (Van-Hook & Rothenberg, 2009). Compassion satisfaction also helps amend traumatic challenges of professional caregiving, in clinical settings (Negash & Sahin, 2011). Research has revealed that compassion satisfaction enhances positive affect, reduces negative behaviors, and moderates the adverse effects of secondary trauma in clinical work settings (Severn et al., 2012; Shepard, 2013). Though compassion satisfaction and compassion fatigue may be experienced simultaneously, higher levels of compassion satisfaction significantly checks the effects of trauma-related stress in practitioners (Bearse et al., 2013; Craig & Sprang, 2010).

A detailed explanation of compassion satisfaction was included in this study because it has been an integral part of previous research pertaining to compassion fatigue. Compassion satisfaction was included in this study as a control variable. It was entered in the multiple regression analysis to help determine the true relationship between compassion fatigue and work attitudes.

Summary

Compassion fatigue has been described as a problem that occurs in clinical practitioners who provide services in traumatic care-giving work settings. Compassion fatigue has been associated with emotional suffering and decreased competence in practitioners who are affected by it (Branson et al., 2013; James & Gilliland, 2013). However, practitioners who exhibit higher levels of compassion satisfaction may be more resilient to the problems of compassion fatigue and other forms of work-related stress (Donahue et al., 2012). The compassion fatigue model of Figley (2002) describes the interplay between emotional disengagement and sense of achievement in sustaining the sense of satisfaction that may help

decrease traumatic stress symptomatology. Constructivist self- development theory provides explanations about how individuals' developmental and thinking patterns can be affected by exposure to traumatic settings and events (Pearlman, 2013). Positive correlations have been established between compassion fatigue and other forms of work- related stress such as burnout and countertransference, while interactions between compassion fatigue and compassion satisfaction have been mostly negative (Cieslak et al., 2013; Slocum- Goris et al., 2013).

The body of knowledge related to the relationships between practitioners' compassion fatigue experiences and work attitudes in the clinical work setting has yet to be integrated. This has created a gap in the literature for this present study to examine. Presenting empirical information regarding how compassion fatigue predicts practitioners' work attitudes in clinical settings may provide practitioners with useful information for competent professional behaviors. Further, research on compassion fatigue issues have mostly focused on developed countries, and there has been minimal research conducted in the developing countries. A significant number of quantitative research studies on compassion fatigue have utilized cross-sectional surveys to obtain data from participants, and regression analysis was used to determine predictive relationships between major research variables for informed interpretations and inferences (Craig & Sprang, 2010; Fernandez-Parsons et al., 2013). For the present study, I utilized cross-sectional survey design and regression analysis to help establish the extent to which compassion fatigue levels might predict work attitudes in clinical practitioners. Details of the methodology and the rationale are presented in Chapter 3.

Chapter 3: Research Methodology

Introduction

The purpose of this study was to investigate how well compassion fatigue predicted work attitudes of primary care physicians who extend services to clients undergoing medical, psychological, and emotional crisis situations in Nigeria's Delta region. In this study, compassion fatigue, which was the independent variable, was described as a deep emotional, psychological, spiritual, and physical weariness that may cause emotional pain in practitioners due to their extensive exposure to clients' trauma in the clinical work setting (Coetzee & Klopper, 2010; Stamm, 2010). Work attitudes, the dependent variable was described in this study, as practitioners' degree of involvement with their work, and their dispositions to clients' needs in the clinical work setting (Kanungo, 1982; Yeh et al., 2007). Compassion satisfaction was used as a moderator variable, and it was defined as the positive aspects of working with trauma.

This chapter gives a description of the research design and approach that I utilized in this study. The targeted population, instruments, operational definition of variables, and procedures for data collection, are also described. Further, the data analysis process, threats to validity and ethical issues regarding the study are presented.

Research Design and Rationale

In this quantitative research, I examined the relationships between compassion fatigue and work attitudes in order to determine how the independent variable, compassion fatigue, impacts the dependent variable, work attitudes, in the participants. I chose quantitative

methods because the study was focused on examining the predictive relationships between and among variables to help answer research questions and hypotheses (Creswell, 2013). Quantitative methods enabled numerical interpretation of participants' responses, for statistical analysis (Creswell, 2013). Compassion satisfaction was entered as a control variable in the regression analysis in order to determine the true effect of the independent variable on the outcome variable. This quantitative, cross-sectional survey design used validated and structured instruments to collect numerical data for statistical analysis (Markovitz et al., 2012; Tacq, 2011). Researchers have asserted that cross-sectional surveys enable numeric descriptions of attitudes, trends, and behaviors of study participants (Creswell, 2013; Markovitz et al., 2012; Shahar & Shahar, 2013).

This approach was appropriate for the study as it enabled data to be collected from a large sample through mailed questionnaires and statistically analyzed. Social science researchers have effectively utilized survey research to collect reliable data for making inferences about human behavior (Frankfort- Nachmias & Nachmias, 2008; Kukull & Ganguli, 2012). As a result, the survey approach also allowed the analyzed data in this study to be interpreted in order to make inferences and draw conclusions regarding the phenomenon under study. Surveys can be distributed to a large number of participants at the same time, so this design allowed timely data collection at one point in time (Helgeson, Voss, & Terpening, 2002; Markovitz et al., 2012).

The survey design further helped minimize researcher bias in this study through the use of standardized questionnaires (Frankfort-Nachmias & Nachmias, 2008). Researchers do

not influence the tone of questions on standardized instruments, so participants are not exposed to the researcher's viewpoint (Markovitz et al., 2012; Smith, Fisher, Heath, 2011). The use of a survey design further offered a cost-effective way of obtaining primary data from participants, and for subsequently describing patterns of relations among variables for objective interpretations and explanations (Williams, 2012). Utilizing anonymous surveys helped support privacy and confidentiality of individuals who participated in this study (Markovitz et al., 2012). This helped to enhance ethical quality of the research (Biemer, 2010; Burn et al., 2008; Frankfort- Nachmias & Nachmias, 2008).

I did not test any treatment variable nor compared groups, for experimental purposes. As a result, the cross-sectional survey was appropriate for providing quantitative description of attitudes in the targeted population (Creswell, 2013; Shahar & Shahar, 2013). Researchers who adopt an experimental research design may be able to establish causal relations between variables (Shahar & Shahar, 2013). However, ethical challenges can arise when using human participants in controlled, manipulative laboratory investigations (Frankfort- Nachmias & Nachmias, 2008; Shahar & Shahar, 2013). This research adopted survey design, as the focus was on testing forms of relationships between study variables and not on testing any form of intervention (Burns et al., 2008). Qualitative research would have provided rich information about participants' lived experiences of the phenomenon under study (Creswell, 2013; Yoshikawa, Weisner, Kalil, & Way, 2013). However, the qualitative approach cannot be used to statistically determine the extent to which such lived experiences may affect participants' work attitudes (Yoshikawa et al., 2013). Therefore the survey design was most appropriate for achieving the purpose of this proposed study.

Methodology

Population

The study was based on a finite population that contained a known countable number of sampling units. The targeted population of this research comprised primary care physicians employed by the Rivers State government in Nigeria's Delta region and posted to practice in community primary health centers across the state. Presently, there are 200 government-owned primary health centers with a total number of 190 physicians posted to 80% of the health centers. Sixty eight percent of the physician population is male, and 32% of the population is female (RSMOH, 2013).

Sampling and Sampling Procedures

The sampling frame comprised of a complete listing of all government-owned primary health care centers, and the actual number of doctors operating in each center. I requested this information from the Human Resources Unit of Rivers State Primary Health Care Board (RSPHCB). I utilized a purposive sampling technique to recruit participants for this study. Since purposive sampling was a non-probability sampling method, purposively selected participants may not have represented the demographic mix of the study population (Banerjee & Chaudhury, 2010; Frankfort-Nachmias & Nachmias, 2008). Social researchers have used purposive sampling to select samples that appear to be representative of the population (Nachmias & Nachmias, 2008; Suresh & Chandrashekara, 2012).

Out of 200 primary health centers, a total of 161 centers have medical doctors posted to them. I mailed out a total of 150 anonymous questionnaires to selected primary care centers with doctors. Participants were assured of confidentiality of their responses to encourage

participation. Participants' identifying information were not collected, recorded on the questionnaires, or entered in SPSS (Harris, 2013). Purposive sampling is mainly based on the researcher's subjective judgment, and used to recruit units in a sample by a deliberate method that is not random (Frankfort-Nachmias & Nachmias, 2008; Olsen, Orr, Bell, & Stuart, 2013). Some social science researchers have used purposive sampling to deliberately achieve a 'total population sampling that examines an entire population with a small size (Olsen et al., 2013).

Calculating the actual sample size needed for quantitative studies requires information on the statistical power, the alpha value, and the effect size (Wang et al., 2013). In order to determine the required, minimal sample size for this study, I used a statistical power value of .80 because it was high enough to reduce the possibility that findings from the study might be due to chance (Charan, & Biswas, 2013; Devane, Begley, & Clarke, 2004). I set the alpha level at .05 to give myself a 95% chance of arriving at the right conclusion. An alpha level of .05 also helped reduce the chances of having Type 1 error of wrongly rejecting the null hypothesis (Wang et al., 2013). Though utilizing a higher level of power such as .95 is recommended when feasible, the conventionally accepted power of .80 was used in this study (Wang et al., 2013). Some past studies on compassion fatigue and dispositions of practitioners have reported medium effect sizes between the ranges of R^2 = .18 to .24 (Adams, Boscarino, & Figley, 2007; Gleichgerrcht & Decety, 2013; Huggard & Dixon, 2011). Some researchers have asserted that very small sample sizes produced by large effect size may miss real effect in the study with possibilities of erroneous conclusions (Charan & Kantharia, 2013). Using very large sample sizes generated by small effect size may require investing a huge amount of resources in the study (Charan &

Kantharia, 2013). A medium effect size may help reduce the probability of missing significant results in a cost-effective manner (Charan & Biswas, 2013; Devane et al., 2004).

Scholars assert that estimates of effect size may be useful for determining the significance and importance of an effect in the study (Lakens, 2013; Wang et al., 2013). Using an estimated medium effect size of .18, power = .80, and alpha = .05, number of predictors (independent and control variables) = 2, the calculated sample size using G*Power was 57 participants for linear regression analysis. G*Power 3 is a freely downloadable software that is used to determine the optimum sample size which is based on a pre-designed effect size, power level, and alpha (Charan & Biswas, 2013; Faul, Erdfelder, Buchner, & Lang, 2009).

Procedures for Recruitment, Participation, and Data Collection

I first obtained approval from the Walden IRB to conduct the study. Next, I obtained permission to conduct the research from the Rivers State Primary Health Care Board [RSPHCB]. The RSPHCB is responsible for recruiting and posting primary care physicians that practice in government- owned primary health centers across the state. I provided a written letter to RSPHCB when I requested permission to conduct this study. The letter provided information about the research, the ethical responsibilities of the researcher, and the benefits and risks of participation. After I obtained the required approval to conduct the study, I sent out anonymous questionnaires by mail addressed to ‘the medical doctor’ to 150 health centers purposively selected from the list of primary care centers with doctors. A reminder letter and extra survey was sent out to all participating primary health care centers again, by the fourth week of data collection. A cover letter was attached to questionnaires and it provided a detailed explanation

about the research. It contained instructions on how participants were to give consent, and it contained information on how participants could contact the researcher for concerns and questions about the study.

Instrumentation and Operationalization of Constructs

I utilized two published instruments, the ProQOL scale and the Job Involvement Questionnaire (JIQ), to collect data for this the study. Additionally, a short section was created in the survey to obtain basic demographic information of gender, age, and years of working experience. This data was used to conduct a necessary descriptive analysis of participants. I obtained permission from the ProQOL center and ABC-CLIO Publishers for the ProQOL and JIQ survey respectively.

Professional Quality of Life Scale (ProQOL)

The ProQOL directly evolved from Figley's CFST (Boscarino et al., 2010; James & Gilliland, 2013; Potter et al, 2013; Ray et al., 2013). The ProQOL was utilized to measure the independent or predictor variable, which is compassion fatigue. The ProQOL is a specific measure for traumatic secondary exposure, and the instrument has been popularly employed by researchers to measure negative and positive effects of trauma-related work in professionals who work with crises and victims of crises (James & Gilliland, 2013; Meadors et al., 2010; Stamm, 2010). The ProQOL has been referenced in over 200 published papers, in about 100,000 articles that can be found on the internet, and in 50% of peer-reviewed quantitative research articles on secondary trauma issues (Knight, 2010; Stamm, 2010). The latest version of the instrument, the ProQOL Version 5, is a 30-item scale that consists of the following three subscales: the compassion satisfaction subscale, the burnout subscale, and the

compassion fatigue/secondary traumatic stress subscale (Stamm, 2010). The compassion satisfaction subscale measures the level of pleasure that practitioners derive from being able to do their work well. Higher scores on this scale represent higher levels of satisfaction experienced by practitioners regarding their ability to provide effective care in the clinical work setting (Stamm, 2010). The burnout subscale measures practitioners' feelings of difficulty in doing their work effectively in clinical work settings due to challenging workloads (Stamm, 2010). Higher scores on this subscale indicate higher levels of burnout in practitioners.

The compassion fatigue/secondary traumatic stress subscale measures practitioners' work-related traumatic stress from secondary exposure to the traumatically stressful events of clients (Stamm, 2010). Higher scores on this scale indicate higher levels of work-related traumatic experiences in the clinical work setting. The compassion fatigue and burnout subscales measure separate, negative affect in practitioners. The compassion fatigue subscale specifically addresses trauma-related issues including fear, which the burnout scale does not measure (Branson et al., 2013; James & Gilliland, 2013; Stamm, 2010).

The compassion fatigue/secondary traumatic stress subscale was utilized to determine practitioners' level of compassion fatigue experiences as it specifically measures trauma-related work stress of participants. However, summary information such as means and standard deviations were reported for the three subscales as researchers are advised to administer the whole instrument instead of extracting single subscales in order to obtain a holistic picture of participants' negative and positive work- related experiences (Stamm, 2010).Compassion satisfaction was used as a control variable in the study, to determine the true effect of the independent variable on the outcome variable.

Reliability and Validity of the ProQOL

Researchers assert that the easy administration of the instrument and the simplicity of items contribute to retrieving reliable responses, with minimal confusion to respondents (Cieslak et al., 2013). In one study the alpha coefficients of the ProQOL scale using Cronbach alpha were reported as .88 for compassion satisfaction scale, .81 for compassion fatigue scale, and .75 for burnout scale (Stamm, 2010). Lawson and Myers (2011) utilized the ProQOL in a study of 506 counselors and reported alpha reliabilities of .80, .78, and .77 for the compassion fatigue, burnout, and compassion satisfaction subscales respectively. Another study used the ProQOL in an investigation regarding licensed clinical social workers in a southern state, and the researchers reported alpha reliabilities of .86, .78, and .91 for the compassion fatigue, burnout, and compassion satisfaction subscales respectively (Thomas & Otis, 2010). Researchers of a pilot study of South African hospice workers reported internal consistency reliabilities of .87, .72, and .80 for the compassion satisfaction, burnout and compassion fatigue subscales respectively (Train & Butler, 2013).

Several studies have examined the validity of the ProQOL. Some researchers have examined the face validity of the ProQOL through focus group sessions with hospice care workers. Participants viewed the scale as a good measure for assessing the negative and positive aspects of trauma work (Slocum- Goris et al, 2013; Sodeke- Gregson et al., 2013). The ProQOL scale has good construct validity, and was founded on the underlying principles of Figley's compassion fatigue model (Stamm, 2005). The Compassion Fatigue Self-Test (CFST) was used to assess for evidence of the construct validity in the ProQOL (Stamm, 2005). Using the multi-trait multi-method mode for convergent and discriminant validity, the ProQOL three sub-scales

measure three different constructs (Stamm, 2005). Inter-scale correlations are small between the compassion satisfaction, burnout, and compassion fatigue subscales. The data indicated discriminant validity between compassion satisfaction and burnout as there was only 5% shared variance between the scale scores for the two constructs. Results also showed discriminant validity between compassion satisfaction and compassion fatigue as there was only 2% shared variance between the two scale scores. However, the shared variance between compassion fatigue and burnout was larger at 34%, and the researcher concluded that the high variance may likely reflect the notion that distress is common in both conditions (Stamm, 2010). Further construct validity testing has verified that all three subscales of the ProQOL instrument measure different constructs, with Cronbach's alpha of .88, .75 and .81 for the Compassion satisfaction, Burnout and Compassion fatigue subscales respectively (Shepard, 2013; Stamm, 2010).

Operationalization of Independent Variable (IV)

Compassion fatigue was measured using the compassion fatigue/secondary traumatic stress subscale of the ProQOL scale. Compassion satisfaction was measured using the compassion satisfaction subscale of the ProQOL scale. The mean scores (M) and standard deviations (SD) of burnout were also retrieved from the burnout subscale and reported for descriptive purposes. Each subscale of the ProQOL is comprised of 10 questions that are measured on a five-point Likert scale of 1 = *Never*; 2 = *Rarely;* 3 = *Sometimes*; 4 = *Often*; and 5 = *Very Often*. The total maximum score on each subscale is 50, with a standard deviation of SD = 10. A raw score of 22 or less on each subscale indicates low levels of compassion fatigue, burnout, or compassion satisfaction. Scores between 23 and 41 indicate moderate levels of

construct, and scores of 42 and above represent high levels of the specific construct being measured by the subscale (Stamm, 2010). While the burnout subscale includes five items that are reverse scored, all items on the compassion fatigue and compassion satisfaction subscales are scored normally. Items that were negatively worded were reverse coded or numerically scored in the opposite direction from the normal items, before total scores are computed. Sample items on the compassion fatigue subscale include: 'I think that I might have been affected by the traumatic stress of those I help while working'; 'I find it difficult to separate my personal life from my life as a helper'; I feel as though I am experiencing the trauma of someone I have helped'.

Job Involvement Questionnaire (JIQ)

The Job Involvement Questionnaire (JIQ) was utilized to measure the dependent or criterion variable, which was work attitude. The JIQ was developed specifically to measure employees' attitudes towards their jobs in terms of their current involvement and engagement with the specific jobs they perform in the work setting (Kanungo, 1982a; Kanungo, 1982b). The instrument is a uni-dimensional, 10-item scale in which the items are rated on a six-point Likert response format of 6 = *Strongly Agree*; 5 = *Agree*; 4 = *Mildly Agree*; 3 = *Mildly Disagree*; 2 = *Disagree*; and 1 = *Strongly Disagree*. Reverse scored items are scored in the opposite direction of *Strongly Agree* = 1 to *Strongly Disagree* = 6.

The JIQ was designed as an even-point scale, which has no middle option of 'neither agree nor disagree'. Kanungo (1982b) used the forced choice method to remove the neutral option as individuals cannot be neutrally involved at work. Instead, the mid-point of indecision is tilted to moderately high or moderately low levels of involvement with the job. Total scores are calculated by summing individual items scores on the scale. The possible raw scores on the JIQ

can range from 10 to 60. The summed raw score of 28 represents the cut-off score for low levels of job involvement, while a summed score of 44 or more represent high levels of job involvement. Summed scores of 29 to 43 that fall between low and high cut-off scores represent moderate levels of job involvement, with lower scores explaining moderately low involvement, and higher scores showing moderately high involvement (Kanungo, 1982b). Apart from items 2 and 7 that are reverse scored, other items on the scale are scored normally. Some researchers have modified the scale into a 5-point Likert scale by collapsing the mid-point into a neutral choice for convenience. However, I used the JIQ scale in its original forced-choice format for the study. Sample items on the instrument include: 'The most important things that happen to me involve my present job'; 'I live, eat and breathe my job'; 'Usually, I feel detached from my job'.

Reliability and Validity of the JIQ

The Job Involvement Questionnaire (JIQ) has a reported internal consistency of .87, and a test-retest reliability coefficient of .85 (Kanungo, 1982a; Zhang, 2013). The median item-total correlations for the 10 items in the JIQ scale was .68, and the values ranged from .59 to .74 (Kanungo, 1982a). The instrument further demonstrated high convergent validity, following validation evaluation and inter-correlations among other involvement scales (Kanungo, 1982a). The JIQ had statistically significant correlations with Lodahl and Kejner (1965) Job Involvement Measure (r = .80). The inter-correlations between the JIQ and the Saleh and Hosek (1976) Job Involvement Scale (JIS) showed a positive relationship of r = .69 (Kanungo, 1982a).

The JIQ has been tested on employees of both private and public organizations and across other demographic factors. There have been no previous indications of statistically significant

differences across gender, age, educational attainment, or ethnic groups in the sampled participants (Kanungo, 1982b). The JIQ was an appropriate instrument to use for this study because it was specifically designed to assess employees' work attitudes regarding their degree of involvement with their job (Kanungo, 1982a; Zhang, 2013). The JIQ has continued to demonstrate high internal consistencies for over two decades. In a study conducted to establish correlations between transformational leadership qualities and job involvement in military employees, researchers reported a Cronbach alpha of .87 (Chen, Yen, & Chen, 2012). In a separate study conducted to examine relationships between job involvement and organizational citizenship behaviors (OCB), researchers reported a high reliability of $\alpha = .88$ on the JIQ (Zhang, 2013). Gorji, Etemadi, and Hoseini (2014) conducted a study to investigate the relationships between organizational support and job involvement in emergency room nurses in Iran. Researchers utilized the JIQ, and also reported a high reliability of $\alpha = .81$.

Reliability is a function of scores and can change from sample to sample (Harris, 2013; Kaplan & Sucuzzo, 2005). Reliability was tested for the instruments that I used in this study using Cronbach's alpha, which assessed the internal consistency of items assigned to the individual scales. Cronbach's alpha was used because it provided a good estimate of reliability, and effectively estimated the source of measurement error (Harris, 2013). I utilized the SPSS options of Analyze-Scale-Reliability analysis, to determine the internal consistency of the study instruments. Results from the reliability analysis are reported in Chapter 4.

Data Analysis Plan

I performed data analysis utilizing the SPSS Statistical Software Package Version. 21. I prescreened and cleaned the data using SPSS data screening and cleaning features

in order to detect and correct errors, and increase the reliability of data used in the data analysis (Osborne, 2013; Zhang, Zhang, & Yang, 2003). The 'ANALYZE-DESCRIPTIVE STATISTICS-EXPLORE' options in SPSS was employed to explore the data for the presence of outliers, skewness, kurtosis, and normality (SPSS Manual, 2014). I used a detailed check of descriptive statistics by variable to investigate for the presence of outliers. Extreme cases, or outliers, may be present in cases where the standard deviation values may be higher than the mean values. The prevalence of zero scores may be an indication of missing information (Zhang et al., 2003). After I inputted data from questionnaires into SPSS, I used options under the ANALYZE-DESCRIPTIVE STATISTICS-FREQUENCIES option to display descriptive and frequency tables. The displayed descriptive and frequency tables of variables were used to assess whether all variables were properly coded or whether there was data that needed to be recoded (SPSS manual, 2014).

All data were properly coded, and missing values were replaced using the series mean option in SPSS. Cases of missing data were replaced using the 'Replace missing value' function. The series mean method was accessed using the SPSS 'Transform' option. SPSS replaced the missing values with the sample mean value for the affected items. Scholars assert that the process of using scale or item means to replace missing data, helps to minimize negative effects of missing data (Atkins et al., 2013; Harris, 2013). Assigning means to missing data also helped to maximize the amount of data available for statistical analysis in quantitative studies (Harris, 2013).

Researchers assert that cases of erroneous values in the dependent and independent variable data set can be set to missing data status. If the missing data is less than 5% of the

overall data set, affected cases can be eliminated or coded to the data set mean or group mean, in order to maintain adequate data and sample size for the data analysis (Zhang et al., 2003; Atkins et al., 2013). Researchers have suggested that in cases where missing data is greater than 5% of the data set, data transformation techniques such as multiple imputation method in SPSS may be used. Imputation method is a procedure that can be used to estimate a value to replace missing values for statistical analysis (Harris, 2013). Imputation of item mean is a conservative approach to replace missing cases, as there will be no change to the overall mean (Harris, 2013). In addition, replacing missing data will ensure adequate cases for statistical analyses (Field, 2011; Harris, 2013). For this study, the series mean method was utilized because missing values accounted for 0.8% of the data set which is less than 5%, as reported in Chapter 4.

Assumptions of Regression Analysis

The assumptions of regression analysis are addressed below, and the results from testing the assumptions are presented in Chapter 4. Some assumptions of regression analysis include the assumption of linear relationships between variables, and the continuous nature of predictor and outcome variables (Field, 2011; Green & Salkind, 2011). Linear regression further assumes that there is no multi-collinearity between predictor variables. Further, data from different participants should be independent to ensure that values of residuals are independent. There is also the assumption of normality of the error distribution, as well as homoscedasticity which proposes that at each level of the predictor variable, the variance of residuals should be constant (Field, 2011).

To test the assumptions for regression I utilized plots and graphs to check the nature of the relationships between the independent and dependent variables for linearity, normality and

homoscedasticity. Results of these plots and graphs confirmed that assumptions for regression were met in the study. Examples of the graphs are presented in Chapter 4. The Durbin-Watson test on SPSS was also used to check for independence of the residuals. A value of 2 means that the residuals are uncorrelated (Field, 2011). SPSS was used to obtain a *ZRESID against *ZPRED plot, histogram, and normal probability plot of the residuals. Residuals in the *ZRESID against *ZPRED graph should resemble a random array of evenly dispersed dots (Field, 2011). A graph that funnels out is an indication of heteroscedasticity in the data (Field, 2011). The histogram ascertained the degree of normality for the residuals. Histograms that approximate a bell-shaped curve indicate data with a normal distribution of scores. Result of normal probability plot of the residuals further gave indications of normality and linearity, as presented in Chapter 4. The diagonal line on the normal probability plot represents a normal distribution, and all residual points should lie close to the diagonal line to achieve normality in the data set (Field, 2011; Green & Salkind, 2011). Plots that are distant from the diagonal line give a clear indication of deviation from normality (Field, 2011). Violation of assumptions will limit generalization of findings to the study sample (Field, 2011; Green & Salkind, 2011).

In this study, compassion fatigue was investigated as the independent variable and work attitude was tested as the dependent variable. The relationship between the independent variable and the dependent variable was tested. The main focus of the study was to determine if the independent variable was a statistically significant predictor of the dependent variable. Compassion satisfaction was entered in the regression analysis as a control variable to determine the true effect of the predictor variable on the outcome variable.

Research Questions and Hypotheses

Research Question 1: How well does the level of compassion fatigue in practitioners predict their work attitudes in the clinical work setting?

$H_0$1: μ1= μ2 The level of compassion fatigue in practitioners, as measured by the Professional Quality of Life (ProQOL) scale, is not a statistically significant predictor of their work attitudes as measured by the Job Involvement Questionnaire (JIQ), in the clinical work setting.

$H_1$1: μ1≠ μ2 The level of compassion fatigue in practitioners, as measured by the Professional Quality of Life (ProQOL) scale, is a statistically significant predictor of their work attitudes as measured by the Job Involvement Questionnaire (JIQ) in the clinical work setting.

Research Question 2: What is the predictive relationship between practitioners' compassion fatigue and their work attitudes, while controlling for compassion satisfaction?

$H_0$2: μ1= μ2 There will be no statistically significant relationship between practitioners' compassion fatigue as measured by the Professional Quality of Life (ProQOL) scale and their work attitudes as measured by the Job Involvement Questionnaire (JIQ), while controlling for compassion satisfaction.

$H_1$2: μ1≠ μ2 There will be a statistically significant relationship between practitioners' compassion fatigue as measured by the Professional Quality of Life (ProQOL) scale and their work attitudes as measured by the Job Involvement Questionnaire (JIQ), while controlling for compassion satisfaction.

Descriptive Analysis

Simple linear regression was utilized to determine the nature of the predictive relationships between the independent variable and the dependent variable. Multiple linear regression was also used to determine the true impact of the predictive variable on the criterion variable, while controlling for compassion satisfaction. Descriptive statistics, such as means and standard deviations, were performed to summarize the demographic characteristics of participants in the sample (Constantine, 2012; Green & Salkind, 2011). Percentages were further utilized to describe the characteristics of the study sample, such as demographic factors.

General Linear Models on SPSS

The goal of the study was to examine how the independent variable, compassion fatigue, predicts the dependent variable, work attitudes, in participants. As a result, simple linear regression was an effective analysis to determine the percentage of variance in the criterion variable that was accounted for by the predictor variable (Field, 2011). Multiple regression analysis was further used to control for compassion satisfaction in the study analysis. Compassion satisfaction was entered into the regression analysis as a control variable to determine the true effect of the independent variable on the outcome variable. Results were explained using the derived coefficients of determination (R^2). The calculated R^2 was used to explain the percentage of variance in the dependent variable accounted for by the predictor variable (Field, 2011; Lynch, 2012). Further, the ANOVA results from the regression analysis were examined to determine the significance of the regression model and reveal statistically significant results for the model (Field, 2011; Lynch, 2012).

Threats to Validity

Validity of surveys ensures that the survey measures what it intends to measure. External validity determines the extent to which the study may be generalized to the population and across settings (Creswell, 2013; Robson, 2006). Internal validity represents the extent to which a causal inference may be established regarding relationships between variables in a study (Campbell & Stanley, 1966). In surveys, internal validity also refers to the rigor of measurement, which ensures that the study constructs are actually measured (Olsen et al., 2013).Threats to statistical conclusion validity in surveys can lead the researcher to reach incorrect conclusions. I discuss below, some threats to validity regarding this study and how they may be addressed.

Threats to External Validity

External validity represents the degree to which results of a study can be generalized to larger populations, settings, and outcomes (Frankfort-Nachmias & Nachmias, 2008). Threats to external validity may affect the generalizability and transferability of results from a study to other groups and environments (Creswell, 2013; Kukull & Ganguli, 2012). Generalizing sample results to larger populations in nonprobability samples such as purposive samples is difficult. This is because the probability of each sampling unit's inclusion is not guaranteed (Olsen et al., 2013). Results of the study were generalized to the specific population and location of the study. Another threat to the external validity of the survey was low response rate, which may adversely affect gathering sizeable data needed for statistical analysis (Robson, 2006). I sent reminder letters to participants by the fourth week of data collection. By appealing to their goodwill and altruistic sentiments, I was able to persuade more participants to fill out their questionnaires and mail them back. Achieving a good response rate, helped provide adequate data which was higher than the calculated sample for proper analysis.

Threats to Internal Validity

Internal validity refers to the approximate validity with which researchers infer that a relationship between two variables is causal (Campbell & Stanley, 1966). Causal relationships usually occur in experiments where treatment variables are manipulated to produce a desired outcome (Creswell, 2013). The present research did not involve any treatment variable, nor was it focused on laying claim to causality. However, some internal validity threats of maturation, history, regression, mortality, instrumentation, selection, and testing are discussed. Maturation occurs when participants in an experiment change or mature over time, and this change affects the participants' performance on the dependent variable (Creswell, 2013; Robson, 2006). The cross-sectional approach of this study attempted to collect data from participants within a short time period to avoid time-related changes. History threat to internal validity refers to critical events other than the planned treatment event that can change the outcomes of the study (Frankfort-Nachmias & Nachmias, 2008). The length of a study can create time for unpredictable events to occur, that unduly affect participants' responses (Robson, 2006). I collected data within a period of six weeks, to reduce the possibilities of unlikely events that can affect the study.

Statistical regression threat is another challenge that affects the internal validity of research. Statistical regression threat occurs when some participants score extreme scores which may be particularly high or low (Walliman, 2011).The extreme scores may be due to chance or measurement error, and will affect the statistical analysis of the study. There were no challenges of extreme scores in the study, as reported in Chapter 4. Experimental mortality threat occurs when participants drop out during a research. To address mortality, I attempted to recruit

a sample size that is larger than the calculated sample size for the study. This helped me gather adequate information for statistical analysis, even when some participants opted out of the study by not returning questionnaires. Instrumental bias poses a threat to internal validity when the measuring instrument that is used in the study changes over time, between a pretest and posttest (Creswell, 2013). I collected data with study instruments at a single point in time. There was no pretest and posttest approach in the present study. Selection biases affect internal validity when participants with different characteristics are assigned to study groups. Researchers are to recruit participants with similar characteristics to different study groups, to reduce the threat to differential selection.

I did not use two or multiple group design, and there was no between group comparison. Further, self-selection bias was reported as a limitation of the study, as participants were not randomly recruited. Testing effects on internal validity occurs when the research instruments are administered to participants more than once (Frankfort-Nachmias & Nachmias, 2008). Participants may become familiar with the outcome measure, and memorize responses for post-testing. I administered study questionnaires only once to participants, and there was no post-testing. Cronbach's alpha was used to determine reliability of study instruments in the present research. This helped prevent testing effects that may occur with the test-retest approach.

The validity of study instruments is also important for achieving internal validity in surveys. The ProQOL scale and the Job Involvement Questionnaire (JIQ) used in this study, have both demonstrated good validity using the Cronbach's alpha. Lawson and Myers (2011) utilized the ProQOL in a study of 506 counsellors and reported alpha reliabilities of .80, .78, and .77 for the compassion fatigue, burnout, and compassion satisfaction subscales

respectively. Researchers of a pilot study of South African hospice workers reported internal consistency reliabilities of .87, .72, and .80 for the compassion satisfaction, burnout, and compassion fatigue subscales respectively (Train & Butler, 2013). Gorji et al. (2014) used the JIQ in a study of emergency nurses, and obtained alpha reliability of .81. Threats to internal validity may also compromise the observed associations between the variables being examined in a study (Campbell & Stanley, 1966). There may be challenges of mortality where respondents drop out from the study before its completion (Creswell, 2013; Ryan et al., 2007). Selection of participants and non-response issues of mail questionnaires can pose problems of adequate sample size, and proper representativeness in survey research (Biemer, 2010; Burns et al., 2008). However, I recruited from a large percentage of the entire study population. Follow-up processes that involved persuasions to participants were also used, in order to retrieve a good number of completed questionnaires from the study population (Helgeson et al., 2002). Utilizing a large percent of the target population further helped in surpassing the required sample size calculated for this study (N = 57), as well as addressing the threat of selection (Krieger, 2012; Pittenger, 2014).

Threats to Statistical Conclusion Validity

Threats to statistical conclusion validity may occur when conclusions from a study are not based on adequate analysis of retrieved data (Garcia-Perez, 2012). Poor data analysis can result from the study not having enough statistical power to detect an existing effect. Low statistical power presents the risk of Type II error which reveals a false effect that may not actually exist (Bakker & Wicherts, 2011; Fiedler et al., 2012). Researchers have also asserted that poor sample size planning or a wrong choice of research design may create errors that affect

statistical conclusion validity (Wang et al., 2013). In addition, adopting statistical methods of analysis that are not appropriate for addressing the research questions and hypotheses may create breaches to statistical conclusion validity (Fiedler et al., 2012). To minimize the threats to statistical conclusion validity, I utilized the standard minimum power of .80 and significance level of .05 in the present study to minimize probability of falsely obtaining statistical significance of the results (Bakker & Wicherts, 2011; Faul et al., 2009). Further, the linear regression analysis procedure that was adopted to analyze data in the study presented a sophisticated statistical method for assessing predictive relationships of variables (Constantine, 2012; Garcia-Perez, 2012).

Ethical Procedures and Participant Consent

Ethical consideration is vital in social research studies, especially when collecting information from human participants in communities due to some risks that participants may incur in the course of the research (Ignacio & Taylor, 2013). I obtained the official list of all government-owned primary health care centers, locations and number of primary care physicians attached to each center from the Rivers State Primary Health Care Board (RSPHCB). A signed Letter of Cooperation was retrieved from the board regarding the information provided for the research. The information did not include personal identifiers of individual participants, in order to protect participants. The study met the requirements of the Institutional Review Board (IRB) of Walden University for approval. Clearance was sought from the Nigerian National Health Research Ethic Committee (NHREC), to meet requirements of international research processes. Following approvals from Walden University IRB, I commenced data collection process for the study.

Letters of invitation to participate in the research were sent to medical doctors attached to 150 purposively selected government-owned primary health centers along with the survey anonymous questionnaires. As I utilized anonymous questionnaires for the survey, I relied on participants' endorsement and support to participate, as a form of consent. Participants were duly informed that completing the surveys would be a full voluntary agreement to participate in the research (Lange et al., 2013; Rudestam & Newton, 2007). Risks were minimal and were not greater than what participants would be exposed to daily in the clinical work setting. The questions on the scales were not difficult to understand, and information regarding the phenomenon under study may have provided beneficial insight to participants, regarding the relationships between compassion fatigue and work attitudes. Participants were informed about their rights to discontinue participation at any point during the research process, without any form of penalties.

Though no form of inducement was provided in exchange for completing surveys, the executive summary of the research have been mailed to all health centers with doctors. The information in the summary provided awareness on the need for prevention and management of trauma-related stress at work. I provided personal contact information to all participants, to give participants access to the researcher in the event they have any questions or confusion about the study. Appreciation letters and executive summary of the study have been mailed to all health centers where doctors are posted, regardless of participation. I have also sent the executive summary of this research to the health board, to meet the conditions of conducting research stated by the board. I made copies of the research summary available to all health centers with doctors, as a way to disseminate information about compassion fatigue to the target population in

Nigeria's Delta region. All information are kept secure and confidential, and were utilized for the sole purpose of the study. Paper questionnaires are being stored in a locked file cabinet. Analyzed data are being stored on external hard drive with pass code protection. All paper questionnaires will be shredded after five years. Analyzed data will also be destroyed after 5 years.

Summary

This quantitative research utilized a cross-sectional survey design to examine how practitioners' compassion fatigue experiences may affect their work attitudes, in the clinical work setting. The Professional Quality of Life Scale (ProQOL) was used to measure participants' level of compassion fatigue (Stamm, 2010), and the Job Involvement Questionnaire (JIQ) was used to determine participants' work attitudes (Kanungo, 1982a). A total of 150 questionnaires were mailed to 150 government-owned primary health care centers in communities across Rivers State in Nigeria's Delta region, for the research. All requirements of Walden University's IRB and Nigeria National Health Research Ethics Committee (NHREC) were met before any research was conducted. SPSS Statistical Software Package Version 21 was utilized for data analysis, and linear regression was used to determine the nature of relationships between the independent variable and the dependent variable. Descriptive statistics were performed to explain the demographics of the study sample, such as means and standard deviations outlined in frequency distributions, in the data (Constantine, 2012). Percentages were also used to describe and differentiate some of the results of data analysis for a clearer picture of population features.

Chapter 4: Results

Introduction

This chapter presents the results from the study, which focused on the effect of compassion fatigue on crisis workers' attitudes toward work. Compassion fatigue was the independent variable in this study, and it was measured by the ProQol Scale. Work attitude was the outcome variable, and it was assessed by the Job Involvement Scale (JIQ). The main purpose of this study was to examine the impact of compassion fatigue on work attitudes of primary health care physicians who manage clients' crisis situations in Nigeria's Delta communities.

Research Questions and Hypotheses

Research Question 1: How well does the level of compassion fatigue in practitioners predict their work attitudes in the clinical work setting?

$H_0$1: μ1= μ2 The level of compassion fatigue in practitioners, as measured by the Professional Quality of Life (ProQOL) scale, is not a statistically significant predictor of their work attitudes as measured by the Job Involvement Questionnaire (JIQ), in the clinical work setting.

$H_1$1: μ1≠ μ2 The level of compassion fatigue in practitioners, as measured by the Professional Quality of Life (ProQOL) scale, is a statistically significant predictor of their work attitudes as measured by the Job Involvement Questionnaire (JIQ) in the clinical work setting.

Research Question 2: What is the predictive relationship between practitioners' compassion fatigue and their work attitudes, while controlling for compassion satisfaction?

$H_0$2: μ1= μ2 There will be no statistically significant relationship between practitioners' compassion fatigue as measured by the Professional Quality of Life (ProQOL) scale and their work attitudes as measured by the Job Involvement Questionnaire (JIQ), while controlling for compassion satisfaction.

$H_1 2$: μ1≠ μ2 There will be a statistically significant relationship between practitioners' compassion fatigue as measured by the Professional Quality of Life (ProQOL) scale and their work attitudes as measured by the Job Involvement Questionnaire (JIQ), while controlling for compassion satisfaction.

In this chapter the data collection procedures and results from the data analyses are presented. Other descriptive information, including appropriate tables and figures, are also provided. Compassion fatigue was the independent variable in this study, and it was measured by the ProQol Scale. Work attitude was the outcome variable, and it was assessed by the Job Involvement Scale (JIQ). The main purpose of this study was to examine the impact of compassion fatigue on work attitudes of primary health care physicians who manage clients' crisis situations in Nigeria's Delta communities.

Data Collection Procedures

Participants for this study were recruited over a period of six weeks. A total of 150 surveys were mailed to 150 government-owned primary health care centers across Rivers State. Mailing information for primary healthcare centers that have a doctor was obtained from the Research Unit of the Rivers State Primary Health Care Board (RSPHCB). The data collection process involved two mass mails addressed to the doctor-in-charge of participating health care centers. Both the initial surveys and the reminder surveys were sent to all participants, in line with anonymous study processes (Appendix. G). The reminder mass mail was sent out by the fourth week of data collection process. The survey consisted of one demographic section, and two instruments: the ProQol and the Job Involvement scales (Appendices C, D & E).

Sample Description

The sample for the study consisted of primary health care physicians who work in government-owned primary health care centers across Rivers State. A total of 69 primary health care physicians responded. Among the 69 participants, two did not complete the ProQol scale and these cases were excluded from the data analysis. The final sample for the study was 67, which was above the a priori calculated sample size of $N = 57$ for this study by approximately 18%. I recorded a survey response rate of 45%. The targeted population consists of 32% female physicians and 68% male physicians (RSMOH, 2013), which was properly reflected in the gender distribution of survey respondents. Despite the low response rate, the obtained sample was a good representation of the study population. The obtained sample consisted of 33% females, and 67% males. The representative sample may be utilized for purposes of generalization in the specific population (Creswell, 2013).

Descriptive Statistics

Out of 67 respondents, 33% ($N = 22$) was female while 67% ($N = 45$) was male. Eighty-one percent ($N = 54$) of respondents were less than 40 years old, while 19% ($N = 13$) of respondents were over 40 years old. Eighty-four percent ($N = 56$) of respondents indicated they had worked as physicians for less than 10 years, while 16% ($N = 11$) of respondents worked as physicians for over 10 years. Demographic characteristics of the study sample are presented in Table 1.

Table 1

Demographic Characteristics of the Study Sample

Variable	N	%
Gender		
Male	45	67
Female	22	33
Age		
Less than 40 years	54	81
More than 40 years	13	19
Years of Work		
Less than 10 years	56	84
More than 10 years	11	16

Descriptive statistics were calculated on the three subscales from the ProQol Scale (Compassion fatigue, Compassion satisfaction, and Burnout subscales). Descriptive statistics were also calculated for the Job Involvement scale (JIQ). The subscale for Burnout was included in the descriptive statistics but was not used in the data analysis because the burnout variable was not tested in this study. The burnout variable was not included in the data analysis as the main focus of the research was on practitioners' compassion fatigue. Table 2 presents the descriptive statistics for the scales, which represents numbers that summarize and describe basic features of the data. Results showed that the means across the three scales on the ProQol ranged from a low of 23.43 to a high of 41.03. The standard deviations ranged from a low of 4.75 to a high of 5.53.

Table 2

Descriptive Statistics for Research Scales

Scale	N	M	SD	Skewness/SE	Kurtosis/SE
ProQol					
CF	67	24.94	4.75	-.182/.293	-.637/.578
CS	67	41.03	5.53	-.341/.293	-.528/.578
BO	67	23.43	4.83	1.57/.293	7.43/.578
JIQ	67	38.14	8.69	-.200/293	-.685/.578

Note. CF = Compassion fatigue; CS = Compassion satisfaction; BO = Burnout; JIQ = Job Involvement Questionnaire.

A correlation matrix was generated to assess the relationships between the variables represented in three subscales of the ProQol Scale and work attitude as measured by the Job Involvement Scale. A significant positive correlation indicates that as one variable increases, the other variable also tends to increase. A significant negative correlation indicates that as one variable increases, the other variable tends to decrease. The closer the correlation value is to 1, the stronger the tendency for relationship, and the closer the correlation value is to 0, the weaker the relationship (George & Mallery, 2008; Campbell & Stanley, 1966). Results showed a statistically significant correlation between compassion fatigue and work attitudes, $r = .327$, $p < .01$. There was also a statistically significant correlation between compassion satisfaction and work attitudes, $r = .638$, $p < .001$. Burnout revealed an inverse correlation with compassion satisfaction, $r = -.395$, $p < .001$, and a positive correlation with compassion fatigue, $r = .230$, $p < .05$.

Table 3

Results of Correlation Matrix

Measure	Work Attitude	CF	CS	BO
Work Attitude	-			
CF	.327**	-		
CS	.638**	.223*	-	
BO	-.255*	.230*	-.395**	-

*$p < .05$, one-tailed. **$p < .01$, one-tailed.

Statistical Assumptions of Linear Regression

The statistical assumptions of linear regression were evaluated in the data analysis, as stated in Chapter 3. The assumption of independent errors was tested with the Durbin-Watson test. The test value of 1.80 is close to 2 which is acceptable (Field, 2011; Savalei & Rhemtulla, 2013). The Durbin-Watson test statistic is used to test for correlation of residuals in regression models (Savalei & Rhemtulla, 2013). Durbin-Watson statistic ranges in value from 0 to 4. A value close to 2 indicates non-correlation. Values close to 0 indicate positive correlations, while values close to 4 indicate negative correlations. Therefore, the test value of 1.80 in this study indicated that the residuals were independent of each other (Field, 2011; Green & Salkind, 2011; Savalei & Rhemtulla, 2013). There was no indication of multi-collinearity between the variables of interest as was evidenced by a number of statistical tests. First, the correlation between compassion fatigue and compassion satisfaction was not strong, $r = .223$. Multicollinearity is indicated when the correlation between variables approaches $r = .80$. Second, the variance

inflation factor (VIF) value of 1.05 was an indication of no multicollinearity among the predictor variables. Statisticians assert that a VIF of 1 means that there is no correlation among the predictor variables (Green & Salkind, 2011; Savalei & Rhemtulla, 2013). However, VIFs exceeding 10 are signs of serious multicollinearity requiring corrections (Field, 2011; Savalei & Rhemtulla, 2013). Finally, the results from the collinearity diagnostics showed that compassion fatigue was high on dimension 2 (.95), and low on dimension 3 (.05), while compassion satisfaction was high on dimension 3 (.81), and low on dimension 2 (.18). Both variables were high on different dimensions, and low on different dimensions. This was an indication of no multicollinearity between the predictor variables (Field, 2011; Green & Salkind, 2011). The data was also screened for outliers prior to being subjected to the regression analysis. The Cook's distance test was utilized to check for outliers in the data. The obtained value of .275 was not greater than 1, which showed an absence of outliers or influential cases (Field, 2011).

SPSS plots were generated to show that assumptions of linear regression were met. To test for normality of error distribution, a P-P plot was generated. The P-P plot (Figure2) shows that the observed points lie reasonably close to the ideal diagonal line of best fit, and is an indication of normality of error distribution (Field, 2011). The histogram (Figure 3) also appears normal with a bell-shape, and suggests normality.

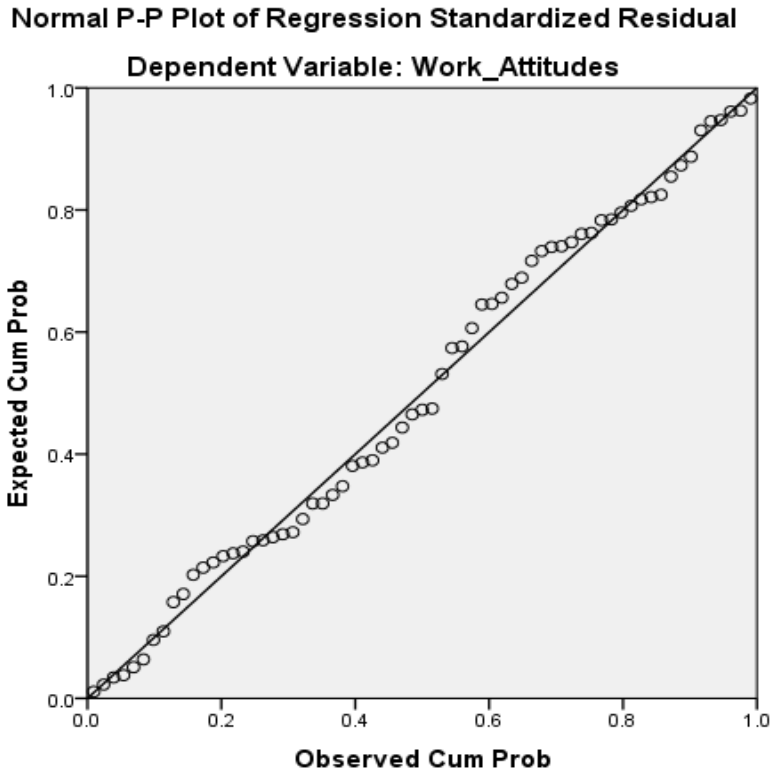


Figure 2: P-P plot of work attitudes and predictor variables, CF and CS

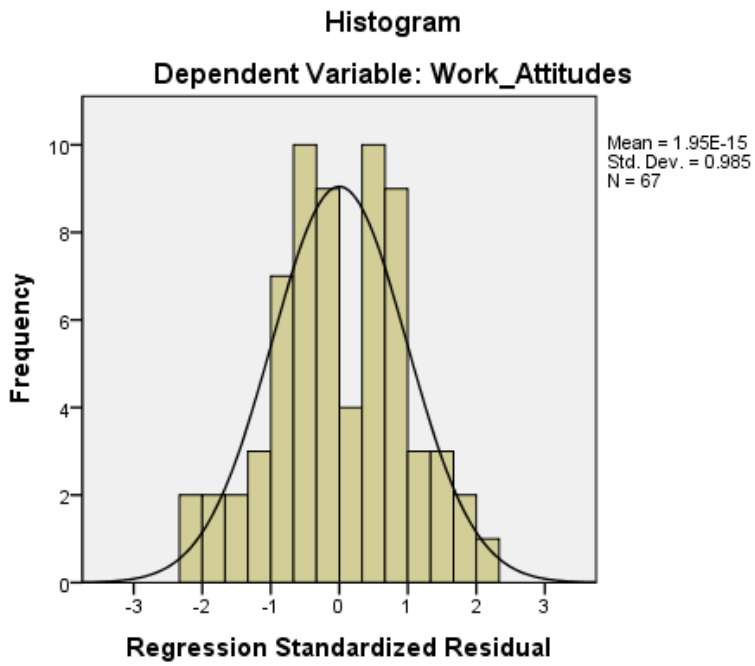


Figure 3: Histogram of work attitudes and predictor variables, CF and CS

Additional plots were generated to test other assumptions of linear regression. The ZRESID / ZPRED plot was generated in SPSS to test for homoscedasticity and linearity (Field, 2011). To check for homoscedasticity, the ZRESID was plotted against the ZPRED (Figure 4), and the scattered nature of the scatter plot indicated that the variances of the residuals were constant (Field, 2011). The graph did not funnel out to indicate the presence of heteroscedasticity in the data (Field, 2011). The ZRESID against ZPRED plot also gave a roughly rectangular-like distribution to indicate linearity. Scores were randomly scattered about a horizontal line, with no systematic clustering pattern (Field, 2011). There was no sort of curve in the graph to indicate non-linearity (Green & Salkind, 2011; Savalei & Rhemtulla, 2013).

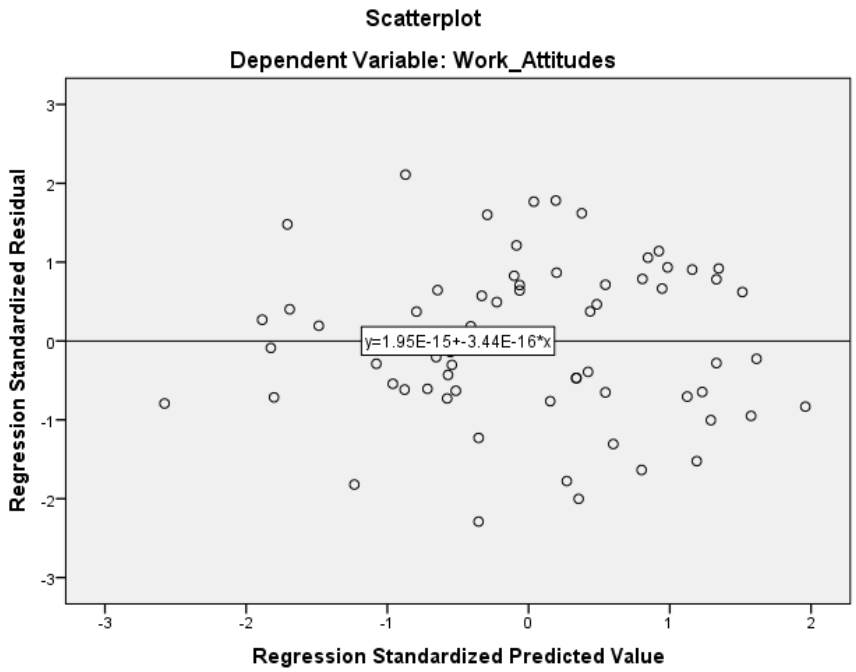


Figure 4: Scatter plot of residuals against predictor variables

The research questions and hypotheses are answered and presented below. The results of the linear regression were used as basis to either reject or accept the null hypotheses. In addition, the obtained effect size which conveys the magnitude and strength of the relationship between the independent and dependent variable is presented.

Research Question 1 and Hypothesis 1

Research Question 1: How well does the level of compassion fatigue in practitioners predict their work attitudes in the clinical work setting?

$H_0$1: µ1= µ2 The level of compassion fatigue in practitioners, as measured by the Professional Quality of Life (ProQOL) scale, is not a statistically significant predictor of their work attitudes as measured by the Job Involvement Questionnaire (JIQ), in the clinical work setting.

$H_1$1: μ1≠ μ2 The level of compassion fatigue in practitioners, as measured by the Professional Quality of Life (ProQOL) scale, is a statistically significant predictor of their work attitudes as measured by the Job Involvement Questionnaire (JIQ) in the clinical work setting.

To assess Research Question 1 and test Hypothesis 1, a simple linear regression was conducted to determine the nature of predictive relationship between compassion fatigue and work attitudes. The independent variables and the dependent variable were entered simultaneously into the model, using the standard regression method. Results from the linear regression showed that compassion fatigue significantly predicted work attitudes of crisis workers, $F(1,65)=7.78$, $p < .05$, $R^2 = .107$, 95% CI [.170, 1.03]. Therefore, the null hypothesis that the level of compassion fatigue in crisis workers is not a statistically significant predictor of their work attitudes was rejected. The effect size ($r = .327$ or $R^2 = .11$) in the study conveys the magnitude and strength of the relationship between the independent and dependent variable. In the context of the results of the study, the reported effect size of $R^2 = .11$ indicated that the independent variable has a small magnitude effect on the outcome variable (Durlak, 2010; Selya, Rose, Dieker, Hedeker, & Mermelstein, 2012). The relevance of the obtained effect size will be further discussed in Chapter 5.

Table 4

Results of Linear Regression with Compassion Fatigue Predicting Work Attitudes

Variable	*B*	*β*	*sr*	*sr²*	*p*	95% CI
Constant (Work Attitude)	23.22					[12.35, 34.09]
Compassion Fatigue (CF)	.598	.327	.327	.107	<.05	[.170, 1.03]

sr = semi-partial correlation. *sr²* = effect size

The model was effective in predicting that compassion fatigue accounted for 11% of the variance in work attitudes. Therefore, compassion fatigue was a statistically significant predictor of work attitudes in the sampled physicians. The linear regression used the following equation: $Y_i = b_o + b_1 X_1$ where Y_i is the outcome variable; b_1 is the gradient of the straight line fitted to the data; b_o is the intercept of that fitted line; X_1 is the predictor variable (Fields, 2011). The regression model for the results is: work attitude$_i$ = 23.22 + (.598compassion fatigue$_i$).

Research Question 2 and Hypothesis 2

Research Question 2: What is the predictive relationship between practitioners' compassion fatigue and their work attitudes, while controlling for compassion satisfaction?

$H_0$2: μ1= μ2 There will be no statistically significant relationship between practitioners' compassion fatigue as measured by the Professional Quality of Life (ProQOL) scale and their work attitudes as measured by the Job Involvement Questionnaire (JIQ), while controlling for compassion satisfaction.

$H_1$2: μ1≠ μ2 There will be a statistically significant relationship between practitioners' compassion fatigue as measured by the Professional Quality of Life (ProQOL) scale and their work attitudes as measured by the Job Involvement Questionnaire (JIQ), while controlling for compassion satisfaction.

To assess Research Question 2 and test Hypothesis 2, a multiple linear regression was conducted using the stepwise method. The stepwise method of multiple regression allows SPSS to automatically search for the predictor variables that best explains the variation in the outcome variable (Field, 2011; Savalei & Rhemtulla, 2013). SPSS will automatically add other predictor variables to the regression equation if they can explain any new variance in the outcome variable

(Field, 2011; Sullivan & Feinn, 2012). Results of the stepwise regression analysis showed that compassion satisfaction was the best significant predictor of work attitudes, $F(1,65) = 44.67$, $p < .001$, $R^2 = .407$ (Table 5). The combined effect of compassion satisfaction and compassion fatigue statistically significantly predicted work attitudes of physicians, $F(2,64) = 25.47$, $p < .001$, $R^2 = .443$. Compassion satisfaction and compassion fatigue jointly accounted for 44% of the variance in work attitude ($R^2 = .443$).

To assess each predictor variable in the multiple regression analysis, SPSS generated a *t*-statistic that I used to determine the statistical significance of each predictor variable (Diebold, Miller, Gensheimer, Mondscheiu, & Ohmart, 2000; Field, 2011; Hoyt, Leierer, & Millington, 2006). SPSS generates *t*-statistic value in the Coefficient table (Appendix A) which is used to confirm if the regression coefficient (*b*-value) of each predictor is significantly different from zero (Field, 2011; Hoyt et al., 2006). The *b*-value for each predictor variable represents the change in the outcome variable resulting from the unit change in the predictor, if the effects of all other predictors are held constant (Diebold et al., 2000; Field, 2011; Savalei & Rhemtulla, 2013). A significant change shows that the predictor made a significant contribution to predicting the outcome (Green & Salkind, 2011; Field, 2011; Savalei & Rhemtulla, 2013).

While holding the effect of compassion satisfaction constant, the effect of compassion fatigue on predicting work attitudes was statistically significant, $t(64) = 2.03$, $p = .05$, $sr = .189$, $sr^2 = .04$. Compassion fatigue uniquely accounted for 4% variance in work attitudes. The results indicated that the *b*-value for compassion fatigue ($b = .355$) presented in the coefficient table was significantly different from zero, and did not result by chance (Diebold et al., 2000; Field, 2011; Green & Salkind, 2011). Compassion fatigue accounted for 4% variance in work attitudes in the

multiple regression analysis. While holding the effect of compassion fatigue constant, the effect of compassion satisfaction on predicting work attitudes was statistically significant, $t(64) = 6.21$, $p < .001$, $sr = .580$, $sr^2 = .34$. Compassion satisfaction uniquely accounted for 34% variance in work attitudes. As a result, the *b*-value for compassion satisfaction, ($b = .936$) is significantly different from zero, and not generated by chance (Table 5). Compassion satisfaction accounted for 34% variance in work attitude in the multiple regression analysis, while compassion fatigue accounted for 4% variance. Therefore, the null hypothesis that there would be no statistically significant relationship between practitioners' compassion fatigue and their work attitudes, while controlling for compassion satisfaction was rejected. The predictive relationship between compassion fatigue and work attitudes, while controlling for compassion satisfaction was statistically significant, with compassion fatigue accounting for 4% of the variance in work attitudes.

The effect of compassion fatigue on work attitudes ($sr^2 = .04$) was of small magnitude, while the effect size for compassion satisfaction ($sr^2 = .34$) on work attitudes was of medium magnitude. In the context of the results of the study, the reported effect size of compassion satisfaction ($sr^2 = 0.34$), indicated that the moderator variable had a medium magnitude effect on the outcome variable (Selya et al., 2012; Sullivan & Feinn, 2012). The percentage of variance in work attitudes accounted for by compassion satisfaction was 30% higher than the percentage accounted for by compassion fatigue. Further, compassion satisfaction moderated the effect of compassion fatigue on work attitudes. The variability accounted for in work attitudes by compassion fatigue was moderated from 11% variance (Table 4) to 4% variance (Table 5). By acting as a moderator, compassion satisfaction influenced the strength of the relationship

between the independent variable and the outcome variable (Antonio & Monteiro, 2015). Therefore, the strength of the predictive relationship between practitioners' compassion fatigue and their work attitudes, while controlling for compassion satisfaction became weaker by 6%.

Table 5

Stepwise Regression Summary for Compassion Fatigue and Compassion Satisfaction Scores Predicting Work Attitudes of Physicians

Variable	*B*	*SE B*	*β*	*sr*	*sr²*	95% CI
Step 1						
Constant (Work Attitude)	-2.95	6.20				[-15.33, 9.43]
Compassion Satisfaction	1.00***	.150	.638	.638	.41	[.704, 1.304]
Step 2						
Constant (Work Attitude)	-9.02	6.75				[-22.52, 4.47]
Compassion Satisfaction	.936***	.151	.595***	.580	.34	[.635, 1.24]
Compassion Fatigue (CF)	.355*	.175	.194*	.189	.04	[.006, .705]

*$p < .05$ ***$p < .001$

The model was effective in predicting that there was a statistically significant relationship between practitioners' compassion fatigue and their work attitudes, while controlling for compassion satisfaction. The multiple regression used the following equation: $Y_i = b_o + b_1 X_{1i} + b_2 X_{2i}$ where Y_i is the outcome variable, b_o is the constant, b_1 is the coefficient of the first predictor (X_1), b_2 is the coefficient of the second predictor (X_2) (Field, 2011). The regression equation for the results is: work attitudes $_i$ = -9.02 + (.936compassion satisfaction$_i$) + (.355compassion fatigue$_i$).

Summary

This chapter presented the data analysis for the two research hypotheses in the study. Sixty- nine physicians out of the 150 physicians that were recruited responded to the survey request, and data from 67 physicians were analyzed using linear regression. Two of the returned surveys were incomplete, and not included in the analysis. The first null hypothesis which stated that the level of compassion fatigue in practitioners is not a statistically significant predictor of their work attitudes in clinical settings was rejected. Compassion fatigue accounted for 11% of variance in work attitudes of practitioners in the simple linear regression model that was conducted. The second null hypothesis which stated that there will be no statistically significant relationship between practitioners' compassion fatigue and their work attitudes, while controlling for compassion satisfaction was rejected. Compassion fatigue accounted for 4% of the variance in work attitudes in the multiple linear regression. Compassion satisfaction also showed a strong statistically significant relationship with work attitudes, in the stepwise multiple regression model. Further, compassion satisfaction moderated the effect of compassion fatigue on work attitudes, from 11% variance to 4% variance.

Chapter 5: Discussion

Introduction

The purpose of this quantitative, exploratory, cross-sectional study was to examine the effect of compassion fatigue on work attitudes of primary health care physicians in Nigeria's Delta Region. Compassion fatigue represents a clinical phenomenon that may have detrimental effects on the wellbeing of practitioners in trauma-related clinical settings. Newell and MacNeil (2010) described compassion fatigue as a state of tension that practitioners experience when preoccupied with traumatic situations of clients. When left unaddressed, compassion fatigue may create adverse emotional, physical, social, and psychological symptoms in practitioners (James & Gilliland, 2013). Compassion fatigue can take huge tolls on practitioners' health in traumatic work environments (Lynch & Lobo, 2012).

The focus of this study was to explore the predictive relationships between compassion fatigue and work attitudes in primary health care physicians employed by the government in Nigeria's Delta region. The independent variable in the study was compassion fatigue, and the outcome variable was work attitude. Compassion satisfaction was utilized as a moderator variable, to determine any change in the strength of the relationship between compassion fatigue and practitioners' work attitudes (Creswell, 2013). The ProQol scale was used to collect data for compassion fatigue and compassion satisfaction variables. The Job Involvement scale (JIQ) was used to collect data for work attitude variable.

Reliability of the study instruments were tested using the Cronbach Alpha in SPSS. The Job Involvement scale (JIQ) recorded a high reliability of $\alpha = .85$, consistent with past research. Kanungo (1982) reported internal consistency of .87 on the JIQ. Zhang (2013) also reported a

reliability coefficient of .85 on the JIQ. This study reported a Cronbach alpha reliability of α = .88 on the Compassion satisfaction subscale of ProQol, also consistent with previous studies. Stamm (2010) reported alpha reliability of α = .88 for the compassion satisfaction subscale. Lawson and Myers (2011) reported alpha reliability of .77 for the compassion satisfaction subscale in a study of 506 counselors. Another study investigating licensed clinical social workers reported alpha reliability of .91 for the compassion satisfaction subscale (Thomas & Otis, 2010). A Cronbach alpha score of .63 was recorded in this study for the compassion fatigue subscale of ProQol. This value was lower than reported values in most other studies. Previous studies have recorded alpha values that range from .71 to .86 for the compassion fatigue subscale (Stamm, 2010; Thomas & Oti, 2011; Slocum-Goris et al., 2013). However, Jacobson et al (2013) recorded a Cronbach alpha score of .68 for the compassion fatigue subscale in a study conducted among the clergy.

The data gathered for this study showed that participants scored in the low to average range for compassion fatigue, average to high range for compassion satisfaction, and moderate range for work attitudes. Results of the simple linear regression conducted for hypothesis 1 indicated that compassion fatigue was a statistically significant predictor of work attitudes in sampled practitioners. Multiple Linear regression further showed a statistically significant predictive relationship between practitioners' compassion fatigue and work attitudes, while controlling for compassion satisfaction,

Discussion and Interpretation of the Findings

The results from this study confirmed some previous findings in peer- reviewed literature and disconfirmed other findings. Participants in this study reported higher levels of compassion

satisfaction than compassion fatigue. Participants also reported moderate levels of work attitudes. The low to average range recorded for compassion fatigue in this group of primary health care physicians supports previous results that education equips physicians with the ability to treat patients without deep emotional engagement. In separate studies, Passalacqua and Sequin (2010), Rosenstein (2012) and Handford et al (2013) all found low to moderate levels of compassion fatigue in physicians. Researchers in these separate studies arrived at the conclusion that clinical education and practice presented great opportunities for physicians to manage stress, develop empathy and enjoy higher levels of compassion satisfaction. The participants in the present study may have reported lower to average compassion fatigue due to their education and enjoyment of clinical practice.

Despite the low to average scores on compassion fatigue, results indicated that compassion fatigue was a statistically significant predictor of work attitudes in practitioners. The present study results showed positive correlations between compassion fatigue and compassion satisfaction. The positive relationship disconfirms previous studies that have examined compassion fatigue and compassion satisfaction. In previous studies, compassion fatigue was shown to have inverse relationships with compassion satisfaction. Craig and Sprang (2010) examined relationships among compassion satisfaction, compassion fatigue, and burnout in trauma treatment therapists across the United States. The quantitative survey used the ProQOL scale and a demographic scale to investigate 532 participants. Multiple regression was used to determine associations between the study variables, as well as clinician factors that can affect compassion fatigue. Results revealed that compassion satisfaction had negative associations with

compassion fatigue. Ray et al. (2013) conducted a quantitative study on frontline mental healthcare professionals (FMHPs) in Ontario, Canada. A total of 169 FMHPs who worked in a variety of roles such as psychology, nursing, social work, and psychiatry participated in the study. The ProQOL and a demographic questionnaire were used in the cross-sectional survey to determine relationships among compassion fatigue, burnout, compassion satisfaction, and work life condition. Pearson correlation and multiple regression were used for analysis in SPSS version 16.0. Results showed that compassion fatigue was negatively associated with compassion satisfaction.

The positive correlation reported for the relationship between compassion fatigue and compassion satisfaction in this study is not consistent with findings from past research. However, few studies have reported positive correlations between compassion fatigue and compassion satisfaction. Researchers from the University of Auckland, New Zealand, reported positive correlations between compassion fatigue and compassion satisfaction. The study by Severn et al. (2012) revealed that as compassion fatigue levels increased in the sampled audiologists, compassion satisfaction levels also increased. Craigie et al. (2015) also found a significant positive association between compassion fatigue and compassion satisfaction in a study of Australian nurses. The study conducted by Craigie et al. (2015) focused on exploring the risk for compassion fatigue in nurses who worked in challenging trauma-related environments, and recorded positive relationships between compassion fatigue and compassion satisfaction, contrary to expectations.

Compassion fatigue and compassion satisfaction can coexist in practitioners (Bearse et al., 2013; Craig & Sprang, 2010). However, higher levels of compassion satisfaction may be

required to significantly check the effects of compassion fatigue in practitioners (James & Gilliland, 2013; Perry et al., 2011). Results of the study showed that practitioners reported lower levels of compassion fatigue, and higher levels of compassion satisfaction simulteanuously. When compassion fatigue and compassion satisfaction coexist, practitioners who have higher levels of compassion satisfaction may tend to exhibit resilience, by showing more care to effectively manage traumatic experiences at work (James & Gilliland, 2013). Adequate knowledge of compassion fatigue and compassion satisfaction discourse is essential to practitioners, for proper management of stressful challenges in traumatic work settings.

Results of this present study also showed that compassion satisfaction is an effective moderator for compassion fatigue in practitioners. This is consistent with past literature that asserts the buffering effect that compassion satisfaction has on compassion fatigue (James & Gilliland, 2013; Potter et al., 2013; Stamm, 2010). Previous studies have reported that compassion satisfaction can counter the effect of compassion fatigue in practitioners (Corso, 2012; James & Gilliland, 2013). Past research has also revealed that compassion satisfaction reduces negative behaviors, enhances positive affect, and moderates the adverse effects of compassion fatigue in clinical work settings (Shepard, 2013). Researchers from Tel Aviv University, Israel conducted a study on the predictors of professional quality of life in physicians (Haber, Palgi, Hamama-Raz, Shrira & Ben-Ezra, 2013). Haber et al (2013) found that compassion satisfaction acted as a protective factor for compassion fatigue, and associated positively with life satisfaction. Hunsaker, Cpen, Hsiu-Chin, Dale, & Heaston (2015) conducted a research on the prevalence of compassion satisfaction and compassion fatigue in emergency

department nurses in the United States. The researchers found that higher levels of compassion satisfaction provided an effective buffer against compassion fatigue.

In this study, compassion fatigue had a small effect on work attitudes of practitioners. However, researchers have argued that it is not only the magnitude of effect that is important, but consideration should also be given to its clinical or practical value (Durlak, 2010; James & Gilliland, 2013). Results of stress-related behavioral measures may have more clinical significance to wellbeing, than outcomes with no direct consequence on individuals' mental wellness (Durlak, 2010). Regarding this study, the small magnitude effect of compassion fatigue on work attitudes presents a clinical concern for practitioners' optimum wellness. If left unchecked, small effects could produce more severe challenges to practitioners' mental wellbeing over time (Figley, 2002). As a result, the small effect of compassion fatigue on work attitudes informs the need for continuous practical self-care activities to address issues of compassion fatigue in practitioners.

The findings of this study may be explained in the context of the etiological model of compassion fatigue. The model provides explanations about the development of compassion fatigue by practitioners, in trauma work settings. The model asserts that practitioners' empathic abilities provide the fundamental aptitude for developing empathic concern to offer genuine assistance to clients (Figley, 2002). The continuous process of relieving clients' suffering may increase susceptibility to compassion stress. The etiological model of compassion fatigue further posits that disengagement and satisfaction are factors that decrease susceptibility to compassion stress, and protect practitioners. Disengagement represents the extent to which practitioners can consciously and objectively distance themselves from their clients' deep pains, during the

helping process. Practitioners' satisfaction with their efforts to help clients generates good sense of achievement which can also reduce susceptibility to compassion stress. However, absence of disengagement efforts and satisfaction allow for unabated compassion stress, which subsequently produce compassion fatigue (Boscarino et al., 2010; Figley, 2002).

Results of low to moderate levels of compassion fatigue in the study indicate that compassion fatigue exists in the practitioners. Details of practitioners' empathic abilities, disengagement efforts, and compassion stress are beyond the scope of the present study, as these variables were not included in the research. However, the presence of compassion fatigue in the study participants is an indication of interactions amongst these variables. The etiological model asserts that compassion fatigue is produced following interactions among practitioners' empathic abilities, compassion stress and disengagement efforts (Figley, 2002). The results of low to moderate levels of compassion fatigue reported by practitioners may be an indication of some disengagement efforts on the part of the practitioners. Practitioners' disengagement efforts may have helped reduce the severity of compassion fatigue experienced. Further, the results of moderate to high levels of compassion satisfaction may be an indication of some form of satisfaction that practitioners enjoy, in the helping process. Satisfaction with the helping process may give explanations to practitioners' reported lower levels of compassion fatigue, in the study.

The findings of this study may further be explained in the context of the CSDT. The theory focuses on underlying causes of trauma and how traumatic experiences affect individuals' reactions and adaptations to a given social context (Pearlman, 2013). Results of this study indicated that the sampled practitioners recorded low to average range for compassion fatigue, and average to high range for compassion satisfaction. Practitioners also reported moderate

levels of work attitudes. Explanations about the extent of disruptions to practitioners' self-capacities, imagery systems or cognitive schemas are beyond the scope of the present study. However, the results of higher levels of compassion satisfaction, lower levels of compassion fatigue, and moderate levels of work attitudes suggest that practitioners may have good strategies for adaptating to their trauma-related work settings. The fact that practitioners reported higher levels of compassion satisfaction, and lower levels of compassion fatigue indicates some measure of positive adaptations to their realities. Adaptations to the realities of trauma work may help practitioners to maintain moderate work attitudes in the trauma-related work environment (James & Gilliland, 2013).

The CSDT further asserts that enhanced ego- resources could help promote empathy and attachments to interpersonal relationships, to help manage trauma at work (Miller et al., 2010). Ego resources are necessary to meet psychological needs in mature ways (Pearlman, 2013). Ego resources also help provide abilities to use cognitive and social skills to protect oneself and maintain relationships. Though the present study is non-experimental and cannot claim causality, results indicate influential interactions among study variables for inferential reasoning (Campbell & Stanley, 1966; Creswell, 2013). Results of moderate levels of work attitudes indicate that practitioners strive towards maintaining relationships with their clients in the clinical setting (Gleichgerrcht & Decety, 2013). Practitioners' higher levels of compassion satisfaction may be an indication of their ability to utilize skills gained from their profession to protect themselves from the deep effects of trauma at work.

Limitations of the Study

There are some limitations in this study that may affect generalizability of the results to other populations. First, the study was limited to physicians in government-owned primary health

care centers in Nigeria's Delta Region., As a result, there is a lack of diversity in the nature of organizations that physicians were employed. Physicians in private practice or specialist hospitals did not participate in this study. Sampling physicians from government-owned and private health centers may have given a broader representation of the general physician population in the study location. Eighty-one percent of the participants in the study were under 40years of age. The study may be more of a reflection of younger physician populations than older physicians. Also, majority of particpants had worked in clinical settings for less than 10years which may be an indication that the results are more specific to this group of physicians. As a result, this study may lack the contributions of older physicians, with more years of working experience. Lack of proper spread regarding participants' age ranges and work experience present limitations to generalizability of results beyond the study participants.

Social desirability bias is another variable which may have influenced participants to respond to survey questions in a manner that supports the way they think to be socially acceptable, instead of the way that reflects real experiences (Beebe et al., 2007). This may have influenced participants' response choices on the surveys, and affected the study results. Further, the research results were limited to only quantitative methods, which may not have fully explored the complex personal experiences associated with compassion fatigue.

Recommendations

Based on the strengths and limitations of this present study, I would suggest that future studies utilize a diversified population to obtain a wider spread of medical specialties in the African setting. It would also be advantageous to utilize a multi-method technique to gather data for future research. This would help to obtain richer and deeper insight into participants'

personal experiences through interviews. Further research could include the burnout variable of ProQol scale in the regression analysis. This will ensure that other aspects of negative experiences not measured by the compassion fatigue subscale are effectively measured. Further research could also control for demographic variables such as gender, age and work experience to better understand differences in groups within the targeted population. More research could be conducted with diverse populations in other African regions for a wider understanding of compassion fatigue in developing nations, to extend present literature.

Some researchers have indicated that spirituality is important in providing resilience and protection in trauma-related settings (Anandaraja & Roseman, 2013). Corso (2012) found that oncology nurses who committed time to nuture their internal resources and spirituality, had greater efficacy with patients in trauma- related work settings. Psychologists also recognize the importance of cultural research in clinical settings (Barret, 2013). Cross-cultural research has further demonstrated the importance of testing psychological theories and concepts across cultures and societies, to properly establish their relevance and validity to human beings in general (Matsumoto & Hwang, 2011). Exploring the variables of spirituality and culture in relation to compassion fatigue and compassion satisfaction in African clinical settings, may provide additional empirical information to compassion fatigue discourse in other cultures.

Implications for Positive Social Change

This research has demonstrated that there is a predictive relationship between compassion fatigue and work attitudes for practitioners who work in trauma-related clinical settings. Creating awareness about compassion fatigue may provide physicians in African settings with concrete information about interactions among compassion fatigue, compassion satisfaction, and work

attitudes. Vital information about compassion fatigue may improve recognition and awareness of compassion fatigue to help prevent compassion fatigue in practitioners, and promote empathetic approaches to trauma-related work. Knowledge about compassion fatigue may also empower practitioners with better understanding of their vulnerabilities to forms of vicarious trauma at work. A proper understanding of work-related vulnerabilities may help practitioners change the social perception of being invincible to traumatic or emotional suffering (Meyer, 2011). Further, the empowerment about compassion fatigue may awaken practitioners' interest to self-care practice, for enhanced personal wellness and social change. Practitioners who effectively engage in and benefit from self-care activities, may set examples for other colleagues and encourage other practitioners to seek help when needed (Figley, 2002). Improved wellness in practitioners ensures equilibrium and balance required to function effectively at work, and also maintain a healthy work life.

Presenting an executive copy of this study to the government health board to meet a desired goal set for this study has provided policy makers with vital information about compassion fatigue. Information about the interactions between compassion fatigue, compassion satisfaction, and work attitudes may help policy makers to take effective actions to improve practitioners' training for better wellbeing. Results of the study could further be used to promote the need for strategies and interventions for preventing compassion fatigue, and enhancing compassion satisfaction in practitioners. Training programs can be adopted as effective strategies to prevent and manage compassion fatigue in practitioners' work environment. As compassion satisfaction acts as a protective factor for compassion fatigue, a strong understanding of compassion satisfaction can also be provided to practitioners to effectively manage compassion

fatigue, and improve work attitudes in clinical settings. This will promote compassion identity and improve work attitudes in trauma-related work settings (Meadors et al., 2010).

Conclusion

The purpose of this research was to examine the predictive relationship between compassion fatigue and work attitudes of practitioners in trauma-related work settings. Physicians are considered to be leaders in the health care industry, and there are high expectations on their overt attitude at work. Previous studies have examined relationships between compassion fatigue, burnout and compassion satisfaction, especially in Western countries. Past studies have not specifically investigated predictive relationships between compassion fatigue and work attitudes, in African trauma-related work settings. Results of this study indicated that compassion fatigue was a statistically significant predictor of practitioners' work attitudes. The study further confirmed previous assertions that compassion satisfaction acts as a protective factor for compassion fatigue and counters the effect of compassion fatigue in practitioners (Barret, 2013; James & Gilliland, 2013).

The study confirms that compassion fatigue and compassion satisfaction may coexist in practitioners at the same time. However, higher levels of compassion satisfaction would help to offset the effects of compassion fatigue in practitioners. Implications for positive social change include providing concrete information about compassion fatigue to participants, and raising awareness about the construct in African trauma-related work settings.

References

Adams, R., Boscarino, J., & Figley, C. (2006). Compassion fatigue and psychological distress among social workers: A validation study. *American Journal of Ortho- psychiatry, 76,* 103- 108. doi:10.1037/0002-9432.76.1.103

Adams, R. E., Figley, C. R., & Boscarino, J. A. (2008). The compassion fatigue scale: Its use with social workers following urban disaster. *Research on Social Work Practice, 18*(3), 238- 250. doi:10.1177/1049731507310190

Akinbobola, O. I. (2011). Conflict in human capital relationships: The impact of job satisfaction and job involvement in a workplace. *International Journal of Social Science and Humanity, 1(*2), 41-46. doi:10.7763/ijssh.2011.v1.16

Alkema, K., Linton, J. M., & Davies, R. (2008). A study of the relationship between self- care, compassion satisfaction, compassion fatigue and burnout among hospice professionals. *Journal of Social Work in End- of- Life & Palliative Care, 4*(2), 101-119. doi:10.1080/15524250802353934

Anagnostopoulos, F., Liolios, E., Persefonis, G., Slater, J., Kafetsios, K., & Niakas, D. (2012). Physician burnout and patient satisfaction with consultation in primary health care settings: Evidence of relationships from a one- with- many- design. *Journal of Clinical Psychology in Medical Settings, 19*(4), 401- 410. doi:10.1007/s10880-011-9278-8

Anandaraja, G., & Roseman, J. L. (2013). A qualitative study of physicians' views on compassionate patient care and spirituality: Medicine as a spiritual practice? *Rhode Island Medical Journal, 97*(3), 17-22. doi:10.1177/089810111435948

Antonio, J. H., & Monteiro, M. B. (2015). Minorities' acculturation and social adjustment: The moderator role of meta-perceptions of majority's acculturation attitudes. *International Journal of Psychology, 10*(2), 144-156. doi:10.1002/ij08.12214

Ajzen, I. (2001). Nature and operation of attitudes. Annual Review of Psychology, 52, 27- 58. doi:10.1146/annurev.psych.52.1.27

Ajzen, I., & Fishbein, M. (2004). Questions raised by a reasoned action approach. *Health Psychology, 23*(4), 431- 434. doi:10.1037/0278-6133.23.4.431

Argote, L. (1989). Agreement about norms and work-unit effectiveness: Evidence from the field. Basic and Applied Social Psychology, 10(2), 131-140. doi:10.1207/s15324834basp10023

Ariapooran, S. (2014). Compassion fatigue and burnout in Iranian nurses: The role of perceived social support. *Iranian Journal of Nursing and Midwifery Research, 19*(3), 279-284. doi:10.4040/jkan.2012.42.6.870

Atkins, D. C., Baldwin, S. A., Zheng, C., Gallop, R. J., & Neighbors, C. (2013). A tutorial on count regression and zero- altered count models for longitudinal substance use data. *Psychology of Addictive Behaviors, 27*(1), 166- 177. Doi:10.1037/a0029508.supp

Austin, W., Goble, E., Leier, B. & Byrne, P. (2009). Compassion fatigue: The experience of nurses. *Ethics and Social Welfare, 3*(2), 195-214. doi:10.5737/1181912x2129197

Aycock, N., & Boyle, D. (2009). Interventions to manage compassion fatigue. *Clinical Journal of Oncology Nursing, 13*(2), 183- 191. doi:10.5737/1181912x2129197

Bakker, M., & Wicherts, J. M. (2011). The (mis)reporting of statistical results in psychology journals. *Behavioral Research Methods, 43*(3), 667- 679. Doi: 10.3758/s13428-011-0089-5

Banerjee, A., & Chaudhury, S. (2010). Statistics without tears: Populations and samples. *Industrial Psychiatry Journal, 19*(1), 60-65. doi:10.4103/0972-6748.77642

Barret, E. J. (2013). Women's work attitudes, aspirations, and work force participation before

and after relocation from public housing. *Journal of Sociology and Social Welfare, 40*(3), 135- 161. doi:10.1177/1049731505276038

Baum, N., Sharon, M., & Rahav, G. (2014). Heightened susceptibility to secondary traumatization: A meta- analysis of gender differences. *American Journal of Orthopsychiatry, 84*(2), 111- 122. doi:10.1037/h0099383

Bearse, J. L., McMinn, M. R., Seegobin, W., & Free, K. (2013). Barriers to psychologists seeking mental health care. *Professional Psychology: Research and Practice, 44*(3), 150-157. doi:10.1037/e694322011-001

Beebe, T. J., Locke, G. R., Barnes, S. A., Davern, M. E., & Anderson, K. J. (2007). Mixing web and mail methods in a survey of physicians. *Health Services Research Journal, 42(*3 1219-1234. doi:10.1111/j.1475-6773.2006.00652.x

Bellolio, M. F., Cabrera, D., Sadosty, A. T., Hess, E. P., Campbell, R. L., Lohse, C. M., & Sunga, K. L. (2014). Compassion fatigue is similar in emergency medicine residents compared to other medical and surgical specialties. *Western Journal of Emergency Medicine, 15(*6), 629-635. doi:10.5811/westjem.2014.5.21624

Belmont Report. (1979). *Code of federal regulations: Human subjects' research*. Retrieved from http://www.hhs.gov/

Benoit, L. G., Veach, P. M., & LeRoy, B. S. (2007). When you care enough to do your very best: Genetic counselor experiences of compassion fatigue. *Journal of Genetic Counselling, 16*(3), 299- 312. doi:10.1007/s10897-006-9072-1

Berzoff, J. & Kita, E. (2010). Compassion fatigue and countertransference: Two different concepts. *Clinical Social Work Journal, 38*(3), 341-349. doi:10.15556/ijsim.01.01.003

Bhana, A., Petersen, I., Baillie, K. L., & Flisher, A. J. (2010). Implementing the World Health

Report 2001 recommendations for integrating mental health into primary health care: A situation analysis of three African countries- Ghana, South Africa, and Uganda. *International Review of Psychiatry, 22*(6), 599- 610. doi:10.3109/09540261.2010.536152

Bhutani, J., Bhutani, S., Singh-Balhara., & Kaira, S. (2012). Compassion fatigue and burnout amongst clinicians: A medical exploratory study. *Indian Journal of Psychological Medicine, 34*(4), 332- 337. Doi:10.4103/0253-7176.108206

Biemer, P. P. (2010). Total survey error: Design, implementation, and evaluation. *Public Opinion Quarterly, 74*(5), 817- 848. doi:10.1093/poq/nfq058

Bilsborrow, R. E., & Henry, S. J. (2012). The use of survey data to study migration-environment relationships in developing countries: Alternative approaches to data collection. *Population and Environment: A Journal of Interdisciplinary Studies, 34*(1), 113-141. doi:10.1007/s11111-012-0177-1

Blanchard, C. G., Labrecque, M. S., Ruckdeschel, J. C., & Blanchard, E. B. (1990). Physician behaviors, patient perceptions, and patient characteristics as predictors of hospitalized adult cancer patients. *Cancer, 65*(1), 186-192. doi:10.1002/1097-0142(199900101)65:1<186::aid-cncr2820650136>3.0.co;2-4

Boer, D., & Fischer, R. (2013). How and when do personal values guide our attitudes and sociality? Explaining cross- cultural variability in attitude- value linkages. *Psychological Bulletin, 139*(5), 1113- 1147. doi:10.1037/a0031347

Boscarino, J. A.; Adams, R. E., & Figley, C. R. (2010). Secondary trauma issues for psychiatrists: Identifying vicarious trauma and job burnout. *Psychiatric Times, 27*(11), 24- 26. doi:10.3410/f.1158766.619996

Boscarino, J. A., Figley, C. R., & Adams, R. E. (2004). Compassion fatigue following the

September 11 terrorist attacks: A study of secondary trauma among New York City Social Workers. International Journal of Emergency Mental Health, 6(2), 57-66.

Boyle, D. A. (2011). Countering compassion fatigue: A requisite nursing agenda. *Online Journal of Issues in Nursing, 16*(1), 2- 16. doi:10.1097/01.nurse.0000461857.48809.al

Branson, D. C, Weigand, D. A., & Keller, J. E. (2013). Vicarious trauma and decreased sexual desire: A hidden hazard of helping others. *Psychological Trauma: Theory, Research, Practice, and Policy, 8*(1), 1-7. doi:10.1037/a0033113

Bride, B. E., Radey, M., & Figley, C. R. (2007). Measuring compassion fatigue. *Clinical Social Work Journal, 35*(3), 155- 163. doi:10.1007/s10615-007-0091-7

Brown, S. P., & Leigh, T. W. (1996). A new look at psychological climate and its relationship to job involvement, effort and performance. *Journal of applied Psychology, 81,* 358- 368.

Burns, K. E., Duffett, M., Kho, M. E., Meade, M. O., Adhikari, N. K., Sinuff, T., & Cook, D. J. (2008). A guide for the design and conduct of self- administered surveys of clinicians. *Canadian Medical Association Journal, 179*(3), 245- 252. doi:10.1037/0021 9010.81.4.358

Burtson, P. L., & Stichler, J. F. (2010). Nurse work environment and nurse caring: Relationship among motivational factors. *Journal of Advanced Nursing, 66*(8), 1819- 1831. doi:10.1111/j.1365-2648.2010.05336.x

Bush, N. J. (2009). Compassion fatigue: Are you at risk? *Oncology Nursing Forum, 36*(1), 24-28. doi:10.1188/09.on.24-28

Campbell, D. T., & Stanley, J. C. (1966). *Experimental and quasi- experimental designs for research.* Boston: Houghton Mifflin Company

Charan, J., & Biswas, T. (2013). How to calculate sample size of different study designs in

medical research. *Indian Journal of Psychological Medicine, 35*(2), 121- 126. doi: 10.4103/0253-7176.116232

Charan, J., & Kantharia, N. D. (2013). How to calculate sample size in animal studies. *Journal of Pharmacology & Pharmaco-therapeutics, 4*(4), 303- 306. Doi:10.4103/0976-500x.119726

Chen, Y., Yen, C., & Chen, L. V. (2012). Transformational leadership and job involvement: The moderation of emotional contagion. *Military Psychology, 24*, 382- 396. doi:10.1080/08995605.2012.695261

Celuch, K., & Dill, A. (2011). An extension of the theory of reasoned action in ethical decision contexts: The role of normative influence and ethical judgment. *Journal of Education for Business, 86*(4), 201- 207. doi:10.1080/08832323.2010.503913

Cieslak, R., Shoji, K., Douglas, A., Melville, E., Luszcynska, A., Benight, C., & Charles, C. (2013). A meta-analysis of the relationship between job burnout and secondary traumatic stress among workers with indirect exposure to trauma. *Psychological Services,* 1-13. doi:10.1037/a0033798

Coetzee, S. K., & Klopper, H. C. (2010). Compassion fatigue within nursing practice: A concept analysis. *Nursing & Health Sciences, 12*(2), 235- 243.

Collins, S., & Long, A. (2003). Too tired to care? The Psychological effects of working with trauma. *Journal of Psychiatric and Mental Health Nursing, 10*, 17- 27. doi.org/10.1046/.1365-2850.2003.00526.x

Colquitt, J. A., Baer, M. D., Long, D. M., & Halvorsen- Ganepola, M. D. (2014). Scale indicators of social exchange relationships: A comparison of relative content validity. *Journal of Applied Psychology*, 1- 21. doi. 10:1037/a0036374

Constantine, N. A. (2012). Regression analysis and causal inference: Cause for concern? *Perspectives on Sexual and Reproductive Health, 44*(2), 134- 137. doi:10.1037/a0033798

Cooke, R., & French, D. P. (2008). How well do the theory of reasoned action and theory of planned behavior predict intentions and attendance at screening programmes? A meta-analysis. *Psychology & Health, 23*(7), 745- 765. doi:10.1080/0887044070154437

Corso, V. M. (2012). Oncology nurse as wounded healer: Developing a compassion identity. *Clinical Journal of Oncology Nursing, 16*(5), 448- 450. doi:10.1188/12.cjon.448-450

Costanza, D. P., Badger, J. M., Fraser, R. L., Severt, J. B., & Gade, P. A. (2012). Generational differences in work- related attitudes: A meta- analysis. *Journal of Business Psychology, 27*(4), 375- 394. doi:10.1007/s10869-012-9259-4

Craig, C. D., & Sprang, G. (2010). Compassion satisfaction, compassion fatigue, and burnout in a national sample of trauma therapists. *Anxiety, Stress & Coping, 23*(3), 319- 339. doi:10.1080/10615800903085818

Craigie, M., Osseiran-Moisson, R., Hemsworth, D., Aoun, S., Francis, K., Brown, J...& Rees, C. (2015). The influence of trait-negative affect and compassion satisfaction on compassion fatigue in Australian nurses. *Psychological Trauma: Theory, Research, Practice, and Policy*. doi: 10.1037/tra0000050.supp

Creswell, J. (2013). *Research design: Qualitative, quantitative and mixed methods approach*. (4th ed.). Thousand Oaks, CA: Sage Publications.

Cropanzano, R., Rupp, D. E., & Byrne, Z. S. (2003). The relationship of emotional exhaustion to work attitudes, job performance, and organizational citizenship behaviors. *Journal of Applied Psychology, 88*(1), 160- 169. doi:10.1037/0021-9010.88.1.160

Davern, M. (2013). Nonresponse rates are a problematic indicator of nonresponse bias in survey research. *Health Services Research, 48*(3), 905-912. doi:10.1111/1475-6773.12070

Day, J. R., & Anderson, R. A. (2011). Compassion fatigue: An application of the concept to informal caregivers of family members with dementia. *Nursing Research and Practice*, 408-424. doi:10.1155/2011/408024

De-Figueiredo, S., Yetwin, A., Sherer, S., Radzik, M., & Iverson, E. (2014). A cross-disciplinary comparison of perceptions of compassion fatigue and satisfaction among service providers of highly traumatized children and adolescents. *Traumatology: An International Journal,* 1-10. Doi:10.1037/h0099833

Deiter- Sands, P. J., & Pearlman, L. A. (2009). *Self- Injury: Treatment of a complex adaptation.* In Kleespies, P. M. (Ed.). Behavioral emergencies: An evidence- based resource for evaluating and managing risk of suicide, violence, and victimization. (pp.211- 234). Washington, DC: American Psychological Association.

De- Janasz, S., Forret, M., Haack, D., & Jonsen, K. (2013). Family status and work attitudes: An investigation in a professional services firm. *British Journal of Management, 24*(2), 191-210. doi:10.1111/j.1467-8551.2011.00797.x

Del Canale, S., Louis, D. Z., Maio, V., Wang, X., Rossi, G., Hojat, M., & Gonnella, J. S. (2012). The relationship between physician empathy and disease complications: An empirical study of primary care physicians and their diabetic patients in parma, Italy. *Academic Medicine, 87(9),* 1243-1249. doi:10.1097/acm.0b013e3182628fbf

Derksen, F., Bensing, J., & Lagro-Janssen, A. (2012). Effectiveness of empathy in general practice: A systematic review. *The British Journal of General Practice, 63*(606), 76-84. doi:10.3399/bjgp13x660814

Devane, D., Begley, C. M., & Clarke, M. (2004). How many do I need? Basic principles of sample size estimation. *Journal of Advanced Nursing, 47*(3), 297- 302. doi:10.1111/j.1365-2648.2004.03093.x

Diebold, C. T. (2000). Building an intervention: A theoretical and practical infrastructure for planning, implementing, and evaluating a metropolitan-wide school-career initiative. *Journal of Educational and Psychological Consultation, 11*(1), 147-172.

Diefendorff, J. M., Brown, D. J., Kamin, A. M., & Lord, R. G. (2002). Examining the roles of job involvement and work centrality in predicting organizational citizenship behaviors and job performance. *Journal of Organizational Behavior, 23*, 93-108. doi:10.1002/job.123

Dimatteo, M. R. (1998). The role of the physician in the emergency health care environment. *The Western Journal of Medicine, 168*, 328-333. doi:10.1097/00003080-199403000-000019

Donahue, E. G., Forest, J., Vallerand, R. J., Lemyre, P., Braud, L., & Bergeron, E. (2012). Passion for work and emotional exhaustion: The mediating role of rumination and recovery. *Applied Psychology: Health and Wellbeing*, *4*(3), 341- 368.

Donald, I., & Cooper, S. (2001). A facet approach to extending the narrative component of the theory of reasoned action. *British Journal of Social Psychology, 40*(4), 599- 621.

Driver, D. (1997). Compassion fatigue: A threat to doctors' health. *Medical Post, 33*(41), 77- 81.

Dunkley, J., & Whelan, T. A. (2006). Vicarious traumatization: Current status and future directions. *British Journal of Guidance and Counselling, 34*(1), 107-118. doi:10.1080/03069880500483166

Durlak, J. A. (2012). How to select, calculate, and interprete effect sizes. *Journal of Pediatric*

Psychology, 34(9), 917-928. Doi:10.1093/jpepsy/jsp004

Eastwood, C. D., & Ecklund, K. (2008). Compassion fatigue risk and self- care practices among residential treatment center childcare workers. *Residential Treatment for Children & Youth, 25*(2), 103- 122.

El-bar, N., Levy, A., Wald, H. S., & Biderman, A. (2013). Compassion fatigue, burnout, and compassion satisfaction among family physicians in the Negev area: A cross-sectional study. *Israel Journal of Health Policy Research, 2,* 31-44. doi:10.1186/2045-4015-2-31

Everly, G. S., & Lating, J. M. (2004). *Personality guided therapy for posttraumatic stress disorder*. Washington, DC: American Psychological Association.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analysis using G*Power 3: Tests for correlation and regression analyses. *Behavioral Research Methods, 41*(4), 1149- 1160. doi: 10.3758/BRM.41.4.1149

Fazio, R. H. (2007). Attitudes as object- evaluation associations of varying strength. *Social Cognition, 25*(5), 603- 637.

Fernandez-Parsons, R., Rodriquez, L., & Goyal, D. (2013). Moral distress in emergency nurses. *Journal of Emergency Nursing, 39*(6), 547-552. doi:10.1016/j.jen.2012.12.009

Fetter, K. L. (2012). We grieve too: One patient oncology unit's interventions for recognizing and combating compassion fatigue. *Clinical Journal of Oncology Nursing, 16*(6), 559-561. doi:10.1188/12.cjon.559-561

Fiedler, K., Kutzner, F., & Krueger, J. I. (2012). The long way from α- error control to validity proper problems with a short- sighted false positive debate. *Perspectives on Psychological Science, 77,* 661- 669. doi: 10.1177/1745691612462587

Field, A. (2011). *Discovering statistics using SPSS*. (3rd ed.). Thousand Oaks, CA: Sage

Publications Inc.

Figley, C. R. (2002). Compassion fatigue: Psychotherapists' chronic lack of self- care. *Journal of Clinical Psychology, 58*(11), 1433- 1441.

Frankfort- Nachmias, C., & Nachmias, D. (2008). *Research methods in the social sciences*. (7th ed.). New York: Worth Publishers.

Fricchione, G. L., Borba, C. P., Alem, A., Shibre, T., Carney, J. R., & Henderson, D. C. (2012). Capacity building in global mental health: Professional training. *Harvard Review of Psychiatry, 20*(1), 47- 57. doi:10.3109/10673229.2012.655211

Gallagher, R. (2013). Compassion fatigue. *Canadian Family Physician, 59*(3), 265-268.

Garcia- Perez, M. A. (2012). Statistical conclusion validity: Some common threats and simple remedies. *Frontiers in Psychology, 3*(1), 325- 341. doi:10.3389/fpsyg.2012.00325

Gentry, J. E., Baranowsky. A. B., & Dunning, K. (2002). The accelerated recovery program (ARP) for compassion fatigue. In C. R. Figley (Ed.), *Treating compassion fatigue* (pp. 123- 138). New York: Brunner- Routledge.

Gleichgerrcht, E., & Decety, J. (2013). Empathy in clinical practice: How individual dispositions, gender, and experience moderate empathic concern, burnout and emotional distress in physicians. *PLoS ONE, 8*(4), 19- 32. doi:10.1371/journal.pone.0061526

Gleichgerrcht, E., & Decety, J. (2014). The relationship between different facets of empathy, pain perception and compassion fatigue among physicians. *Frontiers in Behavioral Neuroscience, 8*: 243-252. doi:10.3389/fnbeh.2014.0024

Goodie, J. L., Kanzler, K. E., Hunter, C. L., Glotfelter, M. A., & Bodart, J. (2013). Ethical and effectiveness considerations with primary care behavioral health research in the medical home. *Families, Systems, & Health, 31*(1), 86- 95. doi:10.1037/a0031852

Gorji, H. A., Etemadi, M., & Hoseini, F. (2014). Perceived organizational support and job involvement in the Iranian health care system: A case study of emergency room nurses in general hospitals. *Journal of Education and Health Promotion, 3*(58), 13-21. doi:10.4103/2277-9531.134760

Gott, M, Frey, R., Raphael, D., O'Callaghan, A., & Robinson, J. (2013). Palliative care need and management in the acute hospital setting: A census of one New Zealand hospital. *BMC Palliative Care, 12*(15), 5- 16. doi:10.1186/1472-684x-12-15

Gough, D. L. (2007). Empathizing or falling in the river? Avoiding and addressing compassion fatigue among service providers. *Journal of the American Deafness and Rehabilitation Association, 40*(3), 13- 25.

Gould- Williams, J. (2007). HR practices, organizational climate and employee outcomes: Evaluating social exchange relationships in local government. *International Journal of Human Resource Management, 18*(9), 1627- 1647.

Green, S. B., & Salkind, N. J. (2011). *Using SPSS for Windows and Macintosh: Analyzing and understanding data*. (6th ed.). Boston: Prentice Hall.

Gross, R., Rabinowitz, J., Feldman, D., & Boerma, W. (1996). Primary healthcare physicians' treatment of psychosocial problems: Implications for social work. *Health & Social Work, 21*(2), 88- 95.

Haber, Y., Palgi, I., Hamama-Raz, Y., Shrira, A., & Ben-Ezra, M. (2013). Predictors of professional quality of life among physicians in a conflict setting: The role of risk and protective factors. *Journal of Psychiatry Related Science, 50*(2), 174-181.

Handford, C., Lemon, J., Grimm, M. C., & Vollmer-Conna, U. (2013). Empathy as a function of

clinical exposure: Reading emotion in the eyes. *PLOS One, 8*(6), 651-659. doi:10.1186/1472-684x-12-15

Harr, C. (2013). Promoting workplace health by diminishing the negative impact of compassion fatigue and increasing compassion satisfaction. *Social Work & Christianity, 40*(1), 71-88. doi:10.1300/j490v21n03_08

Harris, S. M. (2013). Development of the perceptions of mentoring relationships survey: A mixed methods approach. *International Journal of Multiple Research Approaches, 7*(1), 83-95. doi:10.5172/mra.2013.2405

Harrowing, J. N. (2011). Compassion practice by Ugandan nurses who provide HIV care. *Online Journal of Issues in Nursing, 16*(1), 5- 12. doi:10.1016/j.ijnurstu.2009.11.010

Harrowfield, R., & Gardner, D. (2010). Faith at work: Stress and well- being among workers in christian organizations. *Journal of Psychology and Christianity, 29*(3), 208- 217. doi:10.1111/j.1758-0854.2010.01029.x

Hayashino, Y., Utsugi- Ozaki, M., Feldman, M. D., & Fukuhara, S. C. (2012). Hope modified the association between distress and incidence of self- perceived medical errors among practicing physicians: Prospective cohort study. *PLOS ONE, 7*(4), 11- 18. doi:10.1371/journal.pone.0035585

Helgeson, J. G., Voss, K. E., & Terpening, W. D. (2002). Determinants of mail- survey response: Survey design factors and respondents' factors. *Psychology & Marketing, 19*(3), 303-328.

Hooper, C., Craig, J., Janvrin, D., Wetsel, M., & Reimels, E. (2010). Compassion satisfaction, burnout, and compassion fatigue among emergency nurses compared with nurses in other selected inpatient specialties. *Journal of Emergency Nursing, 36,* 420-427.

doi:10.1016/j.jen.2009.11027

Hoyt, W. T., Leierer, S., & Millington, M. J. (2006). Analysis and interpretation of findings using multiple regression techniques. *Rehabilitation Counselling Bulletin, 49*(4), 223-233.

Huggard, P., & Dixn, R. (2011). "Tired of caring": The impact of caring on resident doctors. *Australian Journal of Disaster and Trauma Studies, 3*, 105-111.

Hunsaker, S., Cpen, C., Hsiu-Chin, C., Dale, S., & Heaston, J. (2015). Factors that influence the development of compassion fatigue, burnout, and compassion satisfaction in emergency department nurses. *Journal of Nursing Scholarship, 47*(2), 186-194. doi:10.1111/jnu.12122

IBM. (2014). SPSS statistics user manuals. Retrieved from http://www.umass.edu

Ignacio, J. J., & Taylor, B. J. (2013). Ethical issues in health- care inquiry: A discussion paper. *International Journal of Nursing Practice, 19*(1), 56- 61. doi:10.1111/ijn.12017

Ivey, G. (2013). Cognitive therapy's assimilation of countertransference: A psychodynamic perspective. *British Journal of Psychotherapy, 29*(2), 230- 244. doi: 10.1111/bjp.12015

Jack-Ide, I. O., Uys, L. R., & Middleton, L. E. (2013a). Mental health care policy environment in Rivers State: Experiences of mental health nurses providing mental health care services in neuro- psychiatric hospital, Port- Harcourt, Nigeria. *International Journal of Mental Health Systems, 7*(8), 11-21. doi:10.1186/1752-4458-7-8

Jack- Ide, I. O., Uys, L. R., & Middleton, L. E. (2013b). Caregiving experiences of families of persons with serious mental health problems in the Niger Delta region of Nigeria. *International Journal of Mental Health Nursing, 22*, 170- 179. doi:10.1111/j.1447-0349.2012.00853.x

Jacobson, J. M. (2012). Risk of compassion fatigue and burnout and potential for compassion satisfaction among employee assistance professionals: Protecting the workforce. *Traumatology, 18*(3), 64- 72. doi:10.1177/1534765611431833

Jacobson, J. M., Rothschild, A., Mirza, F., & Shapiro, M. (2013). Risk for burnout and compassion fatigue and potential for compassion satisfaction among clergy: Implications for social work and religious organizations. *Journal of Social Service Research, 39*, 455-468. doi:10.1080/01488376.2012.744627

James, R. K., & Gilliland, B. E. (2013). *Crisis intervention strategies* (7th ed.). Belmont, CA: Brooks/Cole Publishers.

Jenkins, S., & Baird, S. (2002). Secondary traumatic stress and vicarious trauma: A validation study. *Journal of Traumatic Stress, 15*, 423- 432.

Johnson, W. B., Bertschinger, M., Snell, A. K., & Wilson, A. (2014). Secondary trauma and ethical obligations for military psychologists: Preserving compassion and competence in the crucible of combat. *Psychological Services, 11*(1), 68- 74. doi:10.1037/a0033913

Johnson, A., Hong, H., Groth, M., & Parker, S. K. (2011). Learning and development: Promoting nurses' performance and work attitudes. *Journal of Advanced Nursing,67*(3), 609- 620.

Joinson, C. (1992). Coping with compassion fatigue. *Nursing, 22*, 116- 122.

Kanungo, R. N. (1982a).*Work alienation: An integrative approach*. New York: Praeger Publishers.

Kanungo, R. N. (1982b). Measurement of job and work involvement. *Journal of Applied Psychology, 67* (3), 341- 349.

Killian, K. D. (2008). Helping till it hurts? A multimethod study of compassion fatigue, burnout, and self-care in clinicians working with trauma survivors. *Traumatology, 14*(2), 32-44.

Kjellenberg, E., Nilsson, F., Daukantaite, D., & Cardena, E. (2013). Transformative narratives: The impact of working with war and torture survivors. *Psychological Trauma: Theory, Research, Practice, and Policy, 5*(1), 3-15.

Knight, C. (2010). Indirect trauma in the field practicum: Secondary Traumatic stress, vicarious trauma, and compassion fatigue among social work students and their field instructors. *The Journal of Baccalaureate Social Work, 15*(1), 31- 52. doi:10.1080/01609510802546235

Krieger, N. (1992). Overcoming the absence of socioeconomic data in medical records: Validation and application of a census- based methodology. *American Journal of Public Health, 82*(5), 703- 710.

Krieger, N. (2012). Who and what is a 'population'? Historical debates, current controversies, and implications for understanding population health and rectifying health inequities. *The Milbank Quarterly: A Multidisciplinary Journal of Population Health and Health Policy, 90*(4), 634- 681. doi: 10.1111/j.1468-0009.2012.00678.x

Kuchinke, K. P., Cornachione, E. B., Oh, S. Y., & Khang, H. (2010). All work and no play? The meaning of work and work stress of mid- level managers in the United States, Brazil, and Korea. *Human Resource Development International, 13*(4), 393- 408. doi;10.1080/13678868.2010.501961

Lahman, M. K., Geist, M. R., Rodriguez, K. L., Graglia, P., & DeRoche, K. (2011). Culturally response relational reflexive ethics in research: The three Rs. *Quality and Quantity: International Journal of Methodology, 45*(6), 1397- 1414. doi:10.1007/s11135-010-9347-3

Lakens, D. (2013). Calculating and reporting effect sizes to facilitate cumulative science: A

practical primer for t- tests and ANOVAs. *Frontiers in Psychology, 4,* 863- 872. doi: 10.3389/fpsyg.2013.00863

Landen, C. N., Younger, N. O., Collins-Sharp, B. A., & Underwood, P. B. (2003). Cancer patients' satisfaction with physicians: Princess Margaret hospital satisfaction with doctor questionnaire results. *American Journal of Obstetrics & Gynecology, 188*(5), 1177-1179.

Lange, M., Rogers, W., & Dodds, S. (2013). Vulnerability in research ethics: A way forward. *Bioethics, 27*(6), 333- 340. doi:10.1111/bioe.12032

Latham, V. M., & Leddy, P. M. (1987). Source of recruitment and employee attitudes: An analysis of job involvement, organizational commitment, and job satisfaction. *Journal of Business and Psychology, 1*(3), 230-235. doi:10.1007/bf01020811

Lawler, E. J. (2001). An affect theory of social exchange. *American Journal of Sociology, 107*(2), 321- 352.

Lawson, G., & Myers, J. E. (2011). Wellness, professional quality of life, and cancer- sustaining behaviors: What keeps us well? *Journal of Counseling & Development, 89*, 163- 171. doi: 10.1002/j.1556-6678.2011.tb00074.x

Lent, J., & Schwartz, R. (2012). The impact of work setting, demographic characteristics, and personality factors related to burnout among professional counselors. *Journal of Mental Counseling, 34*, 355- 372. doi:10.17744/mehc.34.4.e3k8u2k552515166

Lima, M. E. (2012). The role and the meaning of work in Freud's cultural writings. *International Forum of Psychoanalysis, 21*(1), 3- 16. doi:10.1080/0803706x.2011.603496

Lindsay, E. K., & Creswell, J. D. (2014). Helping the self help others: Self-affirmation increases self-compassion and pro-social behaviors. *Frontiers in Psychology, 5*, 421-433. doi:10.3389/fpsyg.2014.00421

Linley, P. A., & Joseph, S. (2007). Therapy work and therapists' positive and negative wellbeing. *Journal of Social and Clinical Psychology, 26*(3), 358- 403.

Linzer, M., Gerrity, M., Douglas, J. A., McMurray, J. E., Williams, E. S., & Konrad, T. R. (2002). Physician Stress: Results from the physician work life study. *Stress and Health: Journal of the International Society for the Investigation of Stress, 18*(1), 37- 42.

Loeb, D. F., Bayliss, E. A., Binswanger, I. A., Candrian, C., & DeGruy, F. V. (2012). Primary care physician perceptions on caring for complex patients with medical and mental illness. *Journal of General Internal Medicine, 27*(8), 945- 952. doi:10.1007/s11606-012-2005-9

Lu, L., Kao, S., Siu, O., & Lu, C. (2011). Work stress, Chinese work values and work wellbeing in the Greater China. *The Journal of Social Psychology, 151*(6), 767- 783. doi:10.1080/00224545.2010.538760

Lutz, W., & Hill, C. E. (2009). Quantitative and qualitative methods for psychotherapy research: Introduction to special section. *Psychotherapy Research, 19*(4- 5), 369- 373. Doi:10.1080/10503300902948053

Lynch, M. F. (2012). Using multilevel modeling in counseling research. *Measurement and Evaluation in Counseling and Development, 45*(3), 211- 224. doi:10.1177/0748175612437045

Lynch, S. H., & Lobo, M. L. (2012). Compassion fatigue in family caregivers: A Wilsonian concept analysis. *Journal of Advanced Nursing, 68(*9), 2125-2134. doi:10.1111/j.1365.2648.2012.05985.x

Marcus, S. M., Stuart, E. A., Wang, P., Shadish, W. R., & Steiner, P. M. (2012). Estimating the causal effect of randomization versus treatment preference in a doubly randomized

preference trial. *Psychological Methods, 17*(2), 244- 254. doi: 10.1037/a0028031.

Markovitz, A. R., Goldstick, J. E., Levy, K., Cevallos, W., Mukherjee, B., Trostle, J. A., & Eisenberg, J. N. (2012). Where science meets policy: Comparing longitudinal and cross-sectional designs to address diarrhoeal disease burden in the developing world. *International Journal of Epidemiology, 41*(2), 504- 513. doi: 10.1093/ije/dyr194

Maslach, L., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology, 93*(3), 498- 512.

Mason, V. M., Leslie, G., Clark, K., Lyons, P., Walke, E., Butler, C., & Griffin, M. (2014). Compassion fatigue, moral distress, and work engagement in surgical intensive care unit trauma nurses: A pilot study. *Dimensions of Critical Care Nursing, 33*(4), 215-225. doi:10.1097/DCC

Matsumoto, D., & Hwang, H. (2011). Judgements of facial expressions of emotion in profile. *Emotion, 11*(5), 1223-1229. doi:10.1037/a00024356

Mauno, S., Kiuru, N., & Kinnunen, U. (2011). Relationships between work- family culture and work attitudes at both the individual and the departmental level. *Work & Stress, 25*(2), 146- 166. doi:10.1080/02678373.2011.594291

McCann, I. L., & Pearlman, L. A. (1990). Vicarious traumatization: A framework of the psychological effects of working with victims. *Journal of Traumatic Stress, 3*(1), 131-149.

Meadors, P., & Lamson, A. (2008). Compassion fatigue and secondary traumatization: Provider self-care on intensie care units for children. *Journal of Pediatric Health Care, 22*(1), 24-34. Doi:10.1016/j.pedhc.2007.01.006

Meadors, P., Lamson, A., Swanson, M., White, M., & Sira, N. (2010). Secondary traumatization in pediatric healthcare providers: Compassion fatigue, burnout, and secondary traumatic

stress. *OMEGA, 60*(2), 103- 128.

Menezes, M. A., Hodgson, J. M., Sahhar, M., & Metcalfe, S. A. (2013). "Taking its toll": The challenges of working in fetal medicine. *Birth: Issues in Perinatal Care, 40*(1), 52-60. doi:10.1111/birt.12029

Merriman, J. (2015). Enhancing counselor supervision through compassion fatigue education. *Journal of Counseling & Development, 93,* 370-378. doi:10.1002/jcad.12035

Mertz, M., Inthorn, J., Renz, G., Rothenberger, L. G., Salloch, S., Schildmann, J.,…& Schicktanz, S. (2014). Research acorss the disciplines: A road map for quality criteria in empirical ethics research. *BMC Medical Ethics, 15*, 17- 24. Doi:10.1186/1472-6939-15-17

Miller, M. K., Flores, D. M., & Pitcher, B. J. (2010). Using constructivist self- development theory to understand judges' reactions to a courthouse shooting: An exploratory study. *Psychiatry, Psychology, and Law, 17*(1), 121- 138. doi:10.1080/13218710902930309

Mizuno, M., Kinefuchi, E., Kimura, R., & Tsuda, A. (2013). Professional quality of life of Japanese nurses/midwives providing abortion/childbirth care. *Nursing Ethics, 20*(5), 539-550. doi:10.1177/0969733012463723

Molm, L. D., Whitham, M. M., & Melamed, D. (2012). Forms of exchange and integrative bonds: Effects of history and embeddedness. *American Sociological Review, 77*(1), 141-165. doi: 10.1177/0003122411434610

Morelen, D., & Thomassin, K. (2013). Emotion socialization and ethnicity: An examination of practices and outcomes in African American, Asian American and Latin American families. Yale Journal of Biology and Medicine, 86(2), 168-178.

Musa, S. A., & Hamid, A. A. (2008). Psychological problems among aid workers operating in Darfur. *Social Behavior and Personality, 36*(3), 407- 416.

Muse, L. A., & Stamper, C. L. (2007). Perceived organizational support: Evidence for a mediated association with work performance. *Journal of Managerial Issues, 19*(4), 517-535.

Mwape, L., Sikwese, A., Kapungwe, A., Mwanza, J., Flisher, A., Lund, C., & Cooper, S. (2010). Integrating mental health into primary health care in Zambia: A care provider's perspective. *International Journal of Mental Health Systems, 4*(1), 21- 30. doi:10.1186/1752-4458-4-21

Natan, M. B., Beyil, V., & Neta, O. (2009). Nurses' perception of the quality of care they provide to hospitalized drug addicts: Testing the theory of reasoned action. *International Journal of Nursing Practice, 15*(6), 566- 573. doi:10.1111j.1440-172x.2009.01799.x

Negash, S., & Sahin, S. (2011). Compassion fatigue in marriage and family therapy: Implications for therapists and clients. *Journal of Marital & Family Therapy, 37*(1), 1-13. doi:10.1111/j.1752-0606.2009.00147.x

Neumann, M., Edelhauser, F., Tauschel, D., Fischer, M. R., & Wirtz, M. (2011). Empathy decline and its reasons: A systematic review of studies with medical students and residents. *Academic Medicine: Journal of the Association of American Medical Colleges, 86*, 996- 1009. doi:10.1097/acm.0b013e318221e615

Newell, J. M., & MacNeil, G. A. (2010). Professional burnout, vicarious trauma, secondary traumatic stress, and compassion fatigue: A review of theoretical terms, risk factors, and preventive methods for clinicians and researchers. *Best Practices in Mental Health: An International Journal, 6*(2), 57-68.

O'Brien, P. J. (2006). Creating compassion and connection in the work place. *Journal of Systemic Therapies, 25*(1), 16-36.

Ogunrin, O. A., Ogundiran, T. O., & Adebamowo, C. (2013). Development and pilot testing of an online module of ethics education based on the Nigerian national code for health research ethics. *BMC Medical Ethics, 3*, 7- 16. doi:10.1186/1472-6939-14-1

Olsen, R. B., Orr, L. L., Bell, S. H., & Stuart, E. A. (2013). External validity in policy evaluations that choose sites purposively. *Journal of Policy Analysis and Management, 32*(1), 107-121. doi:10.1002/pam.21660

Osborne, J. W. (2013). Is data cleaning and the testing of assumptions relevant in the 21st Century? *Frontiers in Psychology, 4*, 1- 9. doi:10.3389/fpsyg.2013.00370

Passalacqua, S. A., & Segrin, C. (2012). The effect of resident physician stress, burnout, and empathy on patient- centered communication during the long- call shift. *Health Communication, 27*(3), 449- 456. doi:10.1080/10410236.2011.606527

Pearlman, L. A. (2013). Restoring self in community: Collective approaches to psychological trauma after genocide. *Journal of Social Issues, 69*(1), 111- 124. doi:10.1111/josi.12006

Perkins, E. B., & Sprang, G. (2013). Results from the ProQOL-IV for substance abuse counselors working with offenders. *International Journal of Mental Health and Addiction, 11*, 199-213. doi:10.1007/s11469-012-9412-3

Perry, B., Toffner, G., Merrick, T., & Dalton, J. (2011). An exploration of the experience of compassion fatigue in clinical oncology nurses. *Canadian Oncology Nursing Journal, 21*(2), 91-95. Doi:10.5737/1181912x2129197

Petersen, I., Ssebunnya, J., Bhana, A., & Baillie, K. (2011). Lessons from case studies of

integrating mental health into primary health care in South Africa and Uganda. *International Journal of Mental Health Systems, 5*(8), 1- 12. doi:10.1186/1752-4458-5-8

Pittenger, D. J. (2014). When the sample is the population: Big data. *PsycCRITIQUES, 59*(2), 10- 14. doi:10.1037/a0035106

Ponce, W., & Allen, D. (2004). Experience of maltreatment as a child and the acceptance of violence in adult intimate relationships: Mediating effects of distortions in cognitive schemas. *Violence Vict., 19*(1), 97-108.

Potter, P., Deshields, T., Berger, J. A., Clark, M., & Olsen, S. (2013). Evaluation of a compassion fatigue resiliency program for oncology nurses. *Oncology Nursing Forum, 40*(2), 180- 187. doi:10.1188/13.onf.180-187

Radey, M., & Figley, C. R. (2007). The social psychology of compassion. *Clinical Social Work Journal, 35*(3), 207- 214.

Ray, S. L., Wong, C., White, D., & Heaslip, K. (2013). Compassion satisfaction, compassion fatigue, work life conditions, and burnout among frontline mental health care professionals. *Traumatology, 19*(4), 255- 267. doi:10.1177/1534765612471144

Rivers State Ministry of Health. (2013). *Primary health facilities*. Retrieved from http://riversstatemoh.gov.ng/

Robson, C. (2006). *Real world research*. (2nd ed.). Oxford: Blackwell Publishers

Ryan, T., Hatfield, B., Sharma, I., Simpson, V., & McIntyre, A. (2007). A census study of independent mental health sector usage across seven strategic health authorities. *Journal of Mental Health, 16*(2), 243- 253.

Saakvitne, K. W., Tennen, H & Affleck, G. (1998). Exploring thriving in the context of clinical trauma theory: Constructivist self- development theory. *Journal of Social Issues, 54*(2),

279- 299.

Salston, M., & Figley, C. R. (2003). Secondary traumatic stress effects of working with survivors of criminal victimization. *Journal of Traumatic Stress, 16*(2), 167- 174.

Savalei, V., & Rhemtulla, M. (2013). The performance of robust test statistics with categorical data. *British Journal of Mathematical and Statistical Psychology*, *66,* 201-223. doi:10.1111/j.2044-8317.2012.02049x

Sawatzky, J. V., & Enns, C. L. (2012). Exploring the key predictors of retention in emergency nurses. *Journal of Nursing Management, 20*(4), 696- 707. doi:10.1111/j.1365-2834.2012.01355.x

Schaufeli, W. B., Maassen, G. H., Bakker, A. B., & Sixma, H. J. (2011). Stability and change in burnout: A 10 year follow- up study among primary care physicians. *Journal of Occupational and Organizational Psychology, 84*(2), 248- 267. Doi:10.1111/j.2044-8325.2010.02013.x

Scott, K. L., Restubog, S. L., & Zagenczyk, T. (2013). A social exchange- based model of the antecedents of work place exclusion. *Journal of Applied Psychology, 98*(1), 37- 48. doi:10.1037/a0030135

Selya, A. S., Rose J. S ., Dieker, L. C., Hedeker, D., & Mermelstein, R. J. (2012). A practical guide to calculating Cohen's f^2, a measure of local effect size from proc mixed. *Frontiers in Psychology, 3*(111), 56-67. doi:10.3389/fpsyg.2012.00111

Severn, M. S., Searchfield, G. D., & Huggard, P. (2012). Occupational stress amongst audiologists: Compassion satisfaction, compassion fatigue, and burnout. *International Journal of Audiology, 51*, 3- 3. doi:10.1080/13678868.2010.501960

Shahar, E., & Shahar, D. J. (2013). Causal diagrams and the cross- sectional study. *Journal of*

Clinical Epidemiology, 5, 57- 65. doi: 10.2147/CLEP.S42843

Sharabi, M., & Harpaz, I. (2010). Improving employees' work centrality improves organizational performance: Work events and work centrality relationships. *Human Resource Development International, 13*(4), 379-392. doi:10.1080/13678868.2010.501960

Shepard, B. C.. (2013). Between harm reduction, loss and wellness: On the occupational hazards of work. *Harm Reduction Journal, 10*(2)

Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research, 15*(3), 325- 343. doi:10.1186/1477-7517-10-5

Sidani, Y.M., & Jamali, D. (2010). The Egyptian worker: Work beliefs and attitudes. *Journal of Business Ethics, 92*(3), 433- 450. doi:10.1007/s10551-009-0166-1

Slocum-Goris, S., Hemsworth, D., Chan, W. W., Carson, A., Kazanjian, A. (2013). Understanding compassion satisfaction, compassion fatigue, and burnout: A survey of the hospice care workforce. *Palliative Medicine, 27*(2), 172- 178. doi:10.1177/0269216311431311

Smith, B. D. (2007). Sifting through trauma: Compassion fatigue and HIV\AIDS. *Clinical Social Work Journal, 35*(3), 193- 198.

Smith, S. N., Fisher, S. D., & Heath, A. (2011). Opportunities and challenges in the expansion of cross-national survey research. *International Journal of Social Research Methodology: Theory & Practice, 14*(6), 485- 502. doi:10.1080/13645579.2011.611386

Sodeke- Gregson, E. A., Holttum, S., & Billings, J. (2013). Compassion satisfaction, burnout, and secondary traumatic stress in UK therapists who work with adult trauma clients. *European Journal of Psycho-traumatology, 4*, 218- 269. Doi: 10.3402/ejpt.v4i0.21869

Soto, J. A., & Levenson, R. W. (2009). Emotion recognition across cultures: The influence of ethnicity on empathic accuracy and psychological linkage. *Emotion, 9(*6), 874-884. doi:10.1037/a0017399

Sprang, G., Clark, J. J., & Whitt- Woosley, A. (2007). Compassion fatigue, compassion satisfaction and burnout: Factors impacting a professional's quality of life. *Journal of Loss and Trauma, 12*, 259- 280.

Sprang, G., Craig, C., & Clark, J. (2011). Secondary traumatic stress and burnout in child welfare workers: A comparative analysis of occupational distress across professional groups. *Child Welfare*, *90*(6), 149- 168. doi:10.1037/a0021730

Spread, P. (1984). Blau's exchange theory, support and the microstructure. *British Journal of Sociology, 35*(2), 157- 173.

Stamm, B. H. (2002). Measuring compassion satisfaction as well as fatigue: Developmental history of the compassion fatigue and satisfaction test. In C. R. Figley (ed)., 107-119, *Treating compassion fatigue*: New York: Brunner Mazel.

Stamm, B. H. (2005). *The professional quality of life scale: Compassion satisfaction, burnout & compassion fatigue/secondary trauma scales.* Retrieved from http://www.compassionfatigue.org

Stamm, B. H. (2010). *The concise ProQOL manual*. Retrieved from http://www.proqol.org.

Stout, M. S., Germine, A., & Guzman, M. (2013). Exploring managers' attitudes towards work/family programs in the private sector. *The Psychologist Manager Journal, 16*(3), 176- 195. doi:10.1037/mgr0000005

Sullivan, G. M., & Feinn, R. (2012). Using effect size- or why the P value is not enough. *Journal of Graduate Medical Education, 4*(3), 279-282. doi:10.4300/JGME-D-12-00156.1

Suresh, K., & Chandrashekara, S. (2012). Sample size estimation and power analysis for clinical research studies. *Journal of Human Reproductive Sciences, 5(*1), 7-13. doi:10.4103/0974-1208.97779

Tacq, J. (2011). Causality in qualitative and quantitative research. *International Journal of Methodology, 45*(2), 263- 291. doi:10.1007/s11135-009-9293-0

Thomas, J. T., & Otis, M. D. (2010). Intrapsychic correlates of professional quality of life: Mindfulness, empathy, and emotional separation. *Journal of the Society for Social Work and Research, 1*(2), 83- 98. doi: 10.5243/jsswr.2010.7.

Thompson, I. A., Amatea, E. S., & Thompson, E. S. (2014). Personal and contextual predictors of mental health counselors' compassion fatigue and burnout. *Journal of Mental Health Counseling, 36*(1), 58- 77. doi:10.17744/mehc.36.1.p61m73373m4617r3

Train, K. J., & Butler, N. (2013). A pilot study to test psycho-phonetics methodology for self-care and empathy in compassion fatigue, burnout and secondary traumatic stress. *African Journal of Primary Health Care & Family Medicine, 5*(1), 497- 502. doi:10.4102/phcfm.v5il.497

Trippany, R. L., Kress, V. E., & Wilcoxon, S. A. (2004). Preventing vicarious trauma: What counselors should know when working with trauma survivors. *Journal of Counseling & Development, 82*(4), 31- 37.

Van-Hook, M. P., & Rothenberg, M. (2009). Quality of life and compassion satisfaction/compassion fatigue and burnout in child welfare workers: A study of the child welfare workers in community based care organizations in Central Florida. *Social Work & Christianity, 36*(1), 36-54. doi:10.1016/j.chiabu.2006.03.009

Vallerand, R. J., Deshaies, P., Cuerrier, J., Pelletier, L. G., & Mongeau, C. (1992). Ajzen and

Fishbein's theory of reasoned action as applied to moral behavior: A confirmatory analysis. *Journal of Personality and Social Psychology, 62*(1), 98- 109.

Van-Dulmen, A. M., & Bensing, J. M. (2002). Health promoting effects of the physician-patient encounter. *Psychology Health and Medicine, 3*, 289-299.

Van-Mol, M., Kompanje, E., Bakker, J., & Nijkamp, M. (2014). Compassion fatigue and burnout among healthcare professionals in the ICU. *Critical Care, 18*(1), 19-24. doi:10.1186/cc13209

Visser, P. S., Krosnick, J. A., Marquette, J., & Curtin, M. (1996). Mail surveys for election forecasting: An evaluation of the Columbus dispatch poll. *Public Opinion Quarterly, 60*, 181-227. doi:10.1086/297748

Voss- Horrell, S. C., Holohan, D. R., Didion, L. M., & Vance, G. T. (2011). Treating traumatized OEF\ OIF veterans: How does trauma treatment affect the clinician? *Professional Psychology: Research and Practice, 42*(1), 79- 86. doi:10.1037/a0022297

Wang, D., Bakhai, A., Buono, A. D., & Maffuli, N. (2013). Sample size determination for clinical research. *Muscles, Ligaments and* Tendons *Journal, 3*(3), 116- 117. doi:10.1007/978-1-4471-4471-4498-4

Wegge, J., Schmidt, K., Parkes, C., & Van-Dick, R. (2007). 'Taking a sickie': Job satisfaction, job involvement and organizational commitment as interactive predictors of absenteeism in a public organization. *Journal of Occupational and Organizational Psychology, 80*, 77-89.

Williams, J. (2012). Survey methods in an age of austerity: Driving value in survey design. *International Journal of Market Research, 54*(1), 35- 47. doi:10.2501/ijmr-54-1-035-047

Williams, T. R. (1959). A critique of some assumptions of social survey research. *Public*

Opinion Quarterly, 23, 55-62. doi:10.1086/266845

Williams, A. M., Helm, H. M., & Clemens, E. V. (2012). The effect of childhood trauma, personal wellness, supervisory working alliance, and organizational factors on vicarious trauma. *Journal of Mental Health Counseling, 34*(2), 133-153. doi:10.17744/mehc.34.2j3162k872325h583

Walliman, N. (2011). (3rd ed.). *Research project: Designing and planning your work.* Thousand Oaks, CA: Sage Publications.

Yan, G. W., & Beder, J. (2013). Professional quality of life and associated factors among VHA chaplains. *Military Medicine, 178*(6), 638- 645. doi:10.7205/milmed-d-13-00021

Yeh, Y., Ko, J. R., Chang, Y., & Chen, C. V. (2007). Job stress and work attitudes between temporary and permanently employed nurses. Stress and Health: *Journal of the International Society for the Investigation of Stress, 23*(2), 111- 120.

Yildrim, S., & Cam, O. (2012). Nursing academicians' attitudes towards work life and their personality traits. *Journal of Psychiatric and Mental Health Nursing, 19*(8), 709- 714. doi.org/10.1037/2326-3598.1.s.3

Yoder, E. A. (2010). Compassion fatigue in nurses. *Applied Nursing Research, 23*(4), 191-197. doi:10.1016/j.apnr.2008.09003.

Yoshikawa, H., Weisner, T. S., Kalil, A., &Way, N. (2013). Mixing qualitative and quantitative research in developmental science: Uses and methodological choices. *Qualitative Psychology, 1*(3), 3- 18. doi:10.1037/2326-3598.1.s.3

Zerach, G. (2013). Compassion fatigue and compassion satisfaction among residential child care workers: The role of personality resources. *Residential Treatment for Children & Youth, 30*:72-91. doi:10.1080/0886571X.2012.761515

Zhang, S. (2013). Impact of job involvement on organizational behaviors in China. *Journal of Business Ethics, 120,* 165- 174. doi:10. 1007/ s10551-013-1654-x

Zhang, S., Zhang, C., & Yang, Q. (2003). Data preparation for data mining. *Applied Artificial Intelligence, 17*(5- 6), 375- 381.

Appendix A: Letter of Invitation and Consent to Participate in the Study

Dear Medical Doctor,

You are invited to participate in a doctoral research study titled 'Compassion fatigue and crisis workers' attitude to work'. My name is Maria Loolo, a current PH.D candidate at Walden University, and this research will enable me complete my doctoral dissertation. You were invited to participate in this study because you work as a medical doctor in a primary health care setting. If you do not wish to participate in this study, please disregard the attached survey instrument.

Background Information: The purpose of this study is to examine how compassion fatigue may affect physicians, regarding their work in trauma-related clinical settings. Compassion fatigue has been described as a secondary trauma-related stress that may occur in practitioners who are exposed regularly to patients going through physical, psychological, and emotional trauma and crisis situations. My plan is to survey medical doctors in community primary health care centers owned and operated by the government. The goal is to help extend vital information on the concept of compassion fatigue for proper prevention and mitigation measures, in the bid to improve practitioners' individual wellbeing in trauma-related settings.

Procedures: If you agree to participate in this study, please complete the attached anonymous questionnaire and send to the researcher, using the self-addressed stamped envelope enclosed in the study packet. Completing the anonymous questionnaire will serve as your consent to participate in this research and no signatures will be collected, in the bid to preserve anonymity and protect your identity. The anonymous questionnaire comprises a demographic section, and two scales which may take between 20-25 minutes to complete.

Anonymity and Confidentiality: The study is focused on protecting your individual identity. Although there are few demographic questions regarding your gender and years of working, no identifiable data will be collected, in order to guarantee anonymity, and all your responses will be kept confidential and utilized only for the purpose of this study. No data will be released to any individual or organization, and the questionnaire has been structured in a manner that protects participants' identities. Completed questionnaires will be locked in a file cabinet accessible only to the researcher and research supervisor.

Voluntary Nature of the Study: Your participation in this study is entirely voluntary, and completing the attached survey will serve as your consent to participate, to ensure anonymity. To further protect your freedom of participation, you may choose to not answer all or any questions, and you may stop at any time without penalty.

Risks and Benefits of Participation: There are no known physical risks to participating in the study. Emotional discomforts may occur, but will not surpass possible discomforts that you may be exposed to at work. It is important to note that the attached ProQOL scale is not a diagnostic instrument, and will only provide awareness and information for informed self-care plan in traumatic clinical work settings. You may skip any question that presents any form of discomfort to you, and discontinue participation at any time. Benefits of participation may include obtaining valuable information regarding specific strategies for self-care activities that prevent and mitigate compassion fatigue risks in trauma-related work settings. To ensure this, an executive summary of the research and an electronic version of completed dissertation in a flash drive will be mailed you at the end of the study. There will be no financial compensation for participation

in the study. However, you may access support services for stress-related experiences that may result from participation in this study. If you experience any negative effects or distress due to participation in this survey, please endeavor to seek counseling support. You may obtain low-cost confidential support services by calling or visiting government-owned Braithwaite Memorial Specialist Hospital at 084- 230738 or 5 Harley Street, Old GRA, Port-Harcourt, Rivers State. If you are pregnant at this time, you are advised to take extra precaution and promptly seek support for any stress-related experiences after participation.

Contact and Questions: The researcher conducting this study is Maria Loolo, and may be reached at +234-817-554-5177 or maria.loolo@waldenu.edu for any questions or concerns. My dissertation chair is Dr. Jaeckle, and can be reached by email at tinajaeckle@waldenu.edu. If you have questions about your rights as a participant in the study, you may contact Dr. Leilani Endicott. She is the Walden university representative who can discuss those with you. You can contact her at +1-612-312-1210 or irb@waldenu.edu.

You may keep this letter of invitation and implied consent, and mail back the attached survey only.

Appendix B: Demographic Survey

Completing the demographic section of this survey is important for determining the influence of some factors on the study results. The anonymous nature of the questionnaires would help protect any identifying information of the participants of this study. All responses will remain confidential and utilized strictly for the purposes of this study.

Please circle all responses applicable to you.

1. What is your age range?

   Less than 40 years More than 40 years

2. How long have you been working as a medical doctor?

   Less than 10 years More than 10 years

3. What is your gender?

   Male Female

Appendix C: The ProQOL Measure

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 *[helper]*. Consider each of the following questions about you and your current work situation. Select and indicate the number that honestly reflects how frequently you experienced these things in the *last 30 days*, for each question.

1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

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 *[helper]*.
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 *[helper]*.
11. Because of my *[helping]*, I have felt "on edge" about various things.
12. I like my work as a *[helper]*.
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 *[helper].*
20. I have happy thoughts and feelings about those I *[help]* and how I could help them.
21. I feel overwhelmed because my case [work] load 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.

Appendix D: Job Involvement Questionnaire

Job Involvement Questionnaire (JIQ)

INSTRUCTIONS: Below are a number of statements each of which you may agree or disagree with depending on your own personal evaluation of your present job. Please indicate the degree of your agreement or disagreement with each statement by putting a circle around one of the six options representing the answer categories (Strongly agree (SA); Agree (A); Mildly agree (MA); Mildly disagree (MD); Disagree (D); Strongly disagree (SD)

1. The most important things that happen to me involve my present job

   Strongly Agree=6, Agree=5, Mildly Agree=4, Mildly Disagree=3, Disagree=2, Strongly Disagree=1

2. To me, my job is only a part of who I am

   Strongly Agree=1, Agree=2, Mildly Agree=3, Mildly Disagree=4, Disagree=5, Strongly Disagree=6

3. I am very much involved personally in my job

   Strongly Agree=6, Agree=5, Mildly Agree=4, Mildly Disagree=3, Disagree=2, Strongly Disagree=1

4. I live, eat, and breathe my job

   Strongly Agree=6, Agree=5, Mildly Agree=4, Mildly Disagree=3, Disagree=2, Strongly Disagree=1

5. Most of my interests are centered around my job

   Strongly Agree=6, Agree=5, Mildly Agree=4, Mildly Disagree=3, Disagree=2, Strongly Disagree=1

6. I have very strong ties with my present job which would be very difficult to break

   Strongly Agree=6, Agree=5, Mildly Agree=4, Mildly Disagree=3, Disagree=2, Strongly Disagree=1

7. Usually, I feel detached from my job

   Strongly Agree=1, Agree=2, Mildly Agree=3, Mildly Disagree=4, Disagree=5, Strongly Disagree=6

8. Most of my personal life goals are job oriented

Strongly Agree=6, Agree=5, Mildly Agree=4, Mildly Disagree=3, Disagree=2, Strongly Disagree=1

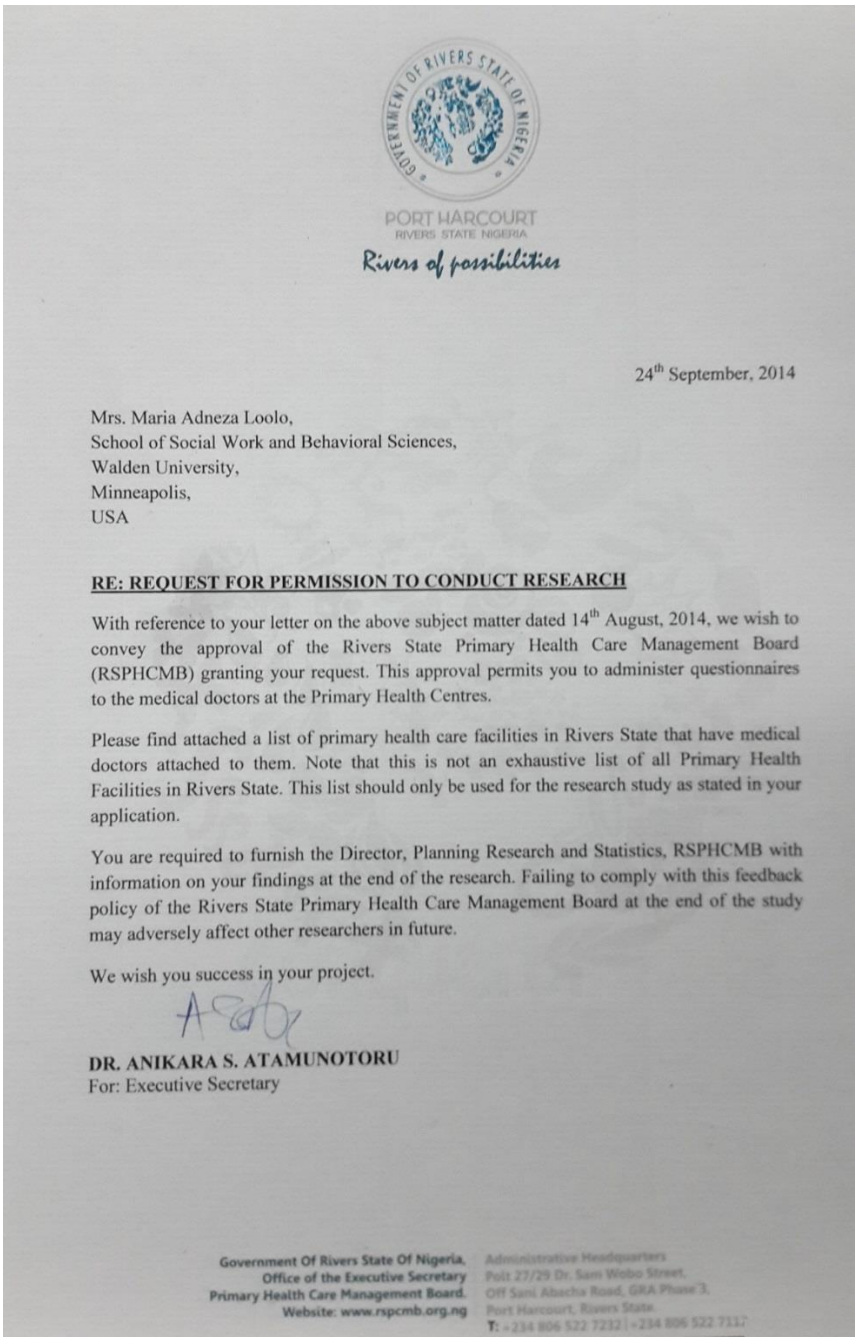
9. I consider my job to be very central to my existence

Strongly Agree=6, Agree=5, Mildly Agree=4, Mildly Disagree=3, Disagree=2, Strongly Disagree=1

10. I like to be absorbed in my job most of the time

Strongly Agree=6, Agree=5, Mildly Agree=4, Mildly Disagree=3, Disagree=2, Strongly Disagree=1

Appendix E: Letter from Rivers State Primary Care Board



GOVERNMENT OF RIVERS STATE OF NIGERIA

PORT HARCOURT
RIVERS STATE NIGERIA
Rivers of possibilities

24th September, 2014

Mrs. Maria Adneza Loolo,
School of Social Work and Behavioral Sciences,
Walden University,
Minneapolis,
USA

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

With reference to your letter on the above subject matter dated 14th August, 2014, we wish to convey the approval of the Rivers State Primary Health Care Management Board (RSPHCMB) granting your request. This approval permits you to administer questionnaires to the medical doctors at the Primary Health Centres.

Please find attached a list of primary health care facilities in Rivers State that have medical doctors attached to them. Note that this is not an exhaustive list of all Primary Health Facilities in Rivers State. This list should only be used for the research study as stated in your application.

You are required to furnish the Director, Planning Research and Statistics, RSPHCMB with information on your findings at the end of the research. Failing to comply with this feedback policy of the Rivers State Primary Health Care Management Board at the end of the study may adversely affect other researchers in future.

We wish you success in your project.

DR. ANIKARA S. ATAMUNOTORU
For: Executive Secretary

Government Of Rivers State Of Nigeria,
Office of the Executive Secretary
Primary Health Care Management Board.
Website: www.rspcmb.org.ng

Administrative Headquarters
Plot 27/29 Dr. Sani Wobo Street,
Off Sani Abacha Road, GRA Phase 3,
Port Harcourt, Rivers State.
T: +234 806 522 7232 | +234 806 522 7117

GOVERNMENT OF RIVERS STATE OF NIGERIA

PORT HARCOURT
RIVERS STATE NIGERIA

Rivers of possibilities

24th September, 2014

Mrs. Maria Adneza Loolo,
School of Social Work and Behavioral Sciences,
Walden University,
Minneapolis,
USA

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

With reference to your letter on the above subject matter dated 14th August, 2014, we wish to convey the approval of the Rivers State Primary Health Care Management Board (RSPHCMB) granting your request. This approval permits you to administer questionnaires to the medical doctors at the Primary Health Centres.

Please find attached a list of primary health care facilities in Rivers State that have medical doctors attached to them. Note that this is not an exhaustive list of all Primary Health Facilities in Rivers State. This list should only be used for the research study as stated in your application.

You are required to furnish the Director, Planning Research and Statistics, RSPHCMB with information on your findings at the end of the research. Failing to comply with this feedback policy of the Rivers State Primary Health Care Management Board at the end of the study may adversely affect other researchers in future.

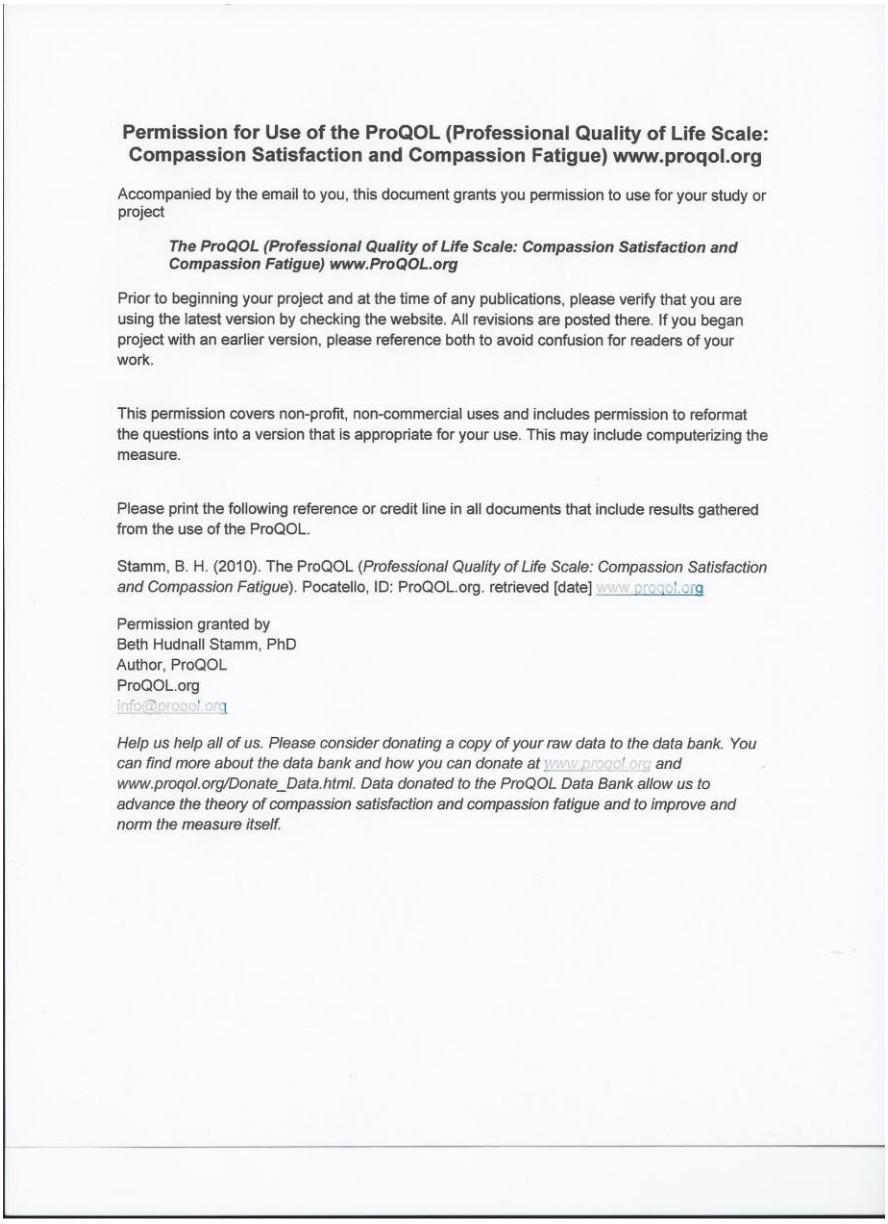
We wish you success in your project.

DR. ANIKARA S. ATAMUNOTORU
For: Executive Secretary

Government Of Rivers State Of Nigeria,
Office of the Executive Secretary
Primary Health Care Management Board.
Website: www.rspcmb.org.ng

Administrative Headquarters
Polt 27/29 Dr. Sam Wobo Street,
Off Sani Abacha Road, GRA Phase 3,
Port Harcourt, Rivers State.

Appendix F: Permission to Use the ProQOL Scale



Permission for Use of the ProQOL (Professional Quality of Life Scale: Compassion Satisfaction and Compassion Fatigue) www.proqol.org

Accompanied by the email to you, this document grants you permission to use for your study or project

The ProQOL (Professional Quality of Life Scale: Compassion Satisfaction and Compassion Fatigue) www.ProQOL.org

Prior to beginning your project and at the time of any publications, please verify that you are using the latest version by checking the website. All revisions are posted there. If you began project with an earlier version, please reference both to avoid confusion for readers of your work.

This permission covers non-profit, non-commercial uses and includes permission to reformat the questions into a version that is appropriate for your use. This may include computerizing the measure.

Please print the following reference or credit line in all documents that include results gathered from the use of the ProQOL.

Stamm, B. H. (2010). The ProQOL (*Professional Quality of Life Scale: Compassion Satisfaction and Compassion Fatigue*). Pocatello, ID: ProQOL.org. retrieved [date] www.proqol.org

Permission granted by
Beth Hudnall Stamm, PhD
Author, ProQOL
ProQOL.org
info@proqol.org

Help us help all of us. Please consider donating a copy of your raw data to the data bank. You can find more about the data bank and how you can donate at www.proqol.org and www.proqol.org/Donate_Data.html. Data donated to the ProQOL Data Bank allow us to advance the theory of compassion satisfaction and compassion fatigue and to improve and norm the measure itself.

Appendix G: Permission to Use the Job Involvement Questionnaire

8/1/2014 view.info.copyright.com/?j=fe4e10777062037e7c1c&m=fecd15717160017e&ls=fdc215707362027e7211747066&l=fe5f15747461077e731d&s=fdfa157175670...

To view this email as a web page, go here.

Do Not Reply Directly to This Email

To ensure that you continue to receive our emails, please add rightslink@marketing.copyright.com to your address book.

RightsLink | Copyright Clearance Center

Thank You For Your Order!

Dear Ms. Maria Loolo,

Thank you for placing your order through Copyright Clearance Center's RightsLink service. ABC-CLIO Inc has partnered with RightsLink to license its content. This notice is a confirmation that your order was successful.

Your order details and publisher terms and conditions are available by clicking the link below:
http://s100.copyright.com/CustomerAdmin/PLF.jsp?ref=a5eb5e74-bef7-4922-8c00-769c35fefd3f

Order Details
Licensee: Maria Loolo Loolo
License Date: Aug 1, 2014
License Number: 3440490542177
Title: Work alienation : an integrative approach
Type Of Use: Thesis/Dissertation
Total: 0.00 USD

To access your account, please visit https://myaccount.copyright.com.

Please note: Online payments are charged immediately after order confirmation; invoices are issued daily and are payable immediately upon receipt.

To ensure that we are continuously improving our services, please take a moment to complete our customer satisfaction survey.

B.1:v4.2

+1-855-239-3415 / Tel: +1-978-646-2777
customercare@copyright.com
http://www.copyright.com

Appendix H: Survey Reminder Letter

Survey Reminder

Dear Medical Doctor,

This is a friendly reminder to participate in the research on "Compassion Fatigue and Crisis Workers' Attitude to Work". I would like to thank everyone who has already responded to the original invitation, and completed the survey. If you have not yet participated, kindly take some minutes to complete the attached survey, and please mail back to me in the enclosed self-addressed stamped envelope. Due to the anonymous nature of this study, I will not be able to differentiate those of you who have responded to the original invitation from those who have not. Please disregard the attached survey if you have already responded.

Thank you for your kind support.

Sincerely,

Maria Loolo

PH.D Candidate, Walden University

Appendix I: NHREC Clearance Letter

National Health Research Ethics Committee of Nigeria (NHREC)

Promoting Highest Ethical and Scientific Standards for Health Research in Nigeria

Federal Ministry of Health

NHREC Protocol Number NHREC/01/01/2007-04/02/2015
NHREC Approval Number NHREC/01/01/2007-19/02/2015
Date: 20th February, 2015

Re: Compassion Fatigue and Crisis Workers' Attitude to Work

Health Research Ethics Committee (HREC) assigned number: NHREC/01/01/2007

Name of Student Supervisor: Dr. T. Jaeckle
Name of Student Investigator: Maria Adneza Loolo

Address of Principal Investigator: Ph.D Candidate
School of Social Work & Human Services
College of Social & Behavioral Sciences,
Walden University, Minneapolis,
MN 55401, USA
ovieateme5@rocketmail.com

Date of receipt of valid application: 04-02-2015
Date when final determination of research was made: 19-02-2015

Notice of Expedited Committee Approval

This is to inform you that the research described in the submitted protocol, the consent forms, advertisements and other participant information materials have been reviewed and *given expedited committee approval by the National Health Research Ethics Committee.*

This approval dates from 19/02/2015 to 18/02/2016. If there is delay in starting the research, please inform the HREC so that the dates of approval can be adjusted accordingly. Note that no participant accrual or activity related to this research may be conducted outside of these dates. *All informed consent forms used in this study must carry the HREC assigned number and duration of HREC approval of the study.* In multiyear research, endeavour to submit your annual report to the HREC early, in order to obtain renewal of your approval and avoid disruption of your research.

The National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the Code including ensuring that all adverse events are reported promptly to the HREC. No changes are permitted in the research without prior approval by the HREC except in circumstances outlined in the Code. The HREC reserves the right to conduct compliance visit your research site without previous notification.

Signed

Clement Adebamowo BMChB Hons (Jos), FWACS, FACS, DSc (Harvard)
Chairman, National Health Research Ethics Committee of Nigeria (NHREC

Department of Health Planning, Research & Statistics
Federal Ministry of Health
11th Floor, Federal Secretariat Complex Phase III
Ahmadu Bello Way, Abuja

Tel: +234-09-523-8367
E-mail: chairman@nhrec.net, secretary@nhrec.net, deskofficer@nhrec.net,
URL: http://www.nhrec.net,