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The Impact of the Exercise of Self-Care Agency and Compassion Satisfaction on the Professional Social Worker

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2020

Abstract

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by

Elaine Franks Carter

MPhil, Walden University, 2019

MA Respecialization, Chicago School of Professional Psychology, 2012

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Few studies have provided empirical data on the relationship between compassion satisfaction and self-care agency in professionals like the professional social worker, even though compassion satisfaction could be a prime motivator for continued work in the field of social work. To address this gap, this quantitative study addressed the research question asking if there was a statistically significant linear relationship between the exercise of self-care agency and compassion satisfaction. This study centered on theories related to the compassion satisfaction and the compassion satisfaction/compassion fatigue theories of Stamm (2010), and self-care agency and the theories of self-care/self-care deficit of Orem (1980; 1985). Forty-six licensed master's level professional social workers took part in a quantitative, moderated regression two-part study that used a pretest-posttest/control-group design with linear and multiple regression analyses in Part 1, and repeated measures ANOVAs, and paired samples *t*-tests in Part 2. Results revealed a moderate, statistically significant positive, linear relationship between the exercise of self-care agency and compassion satisfaction; and secondary traumatic stress and burnout also showed statistically significant negative, linear relationships with the exercise of self-care agency supported by family-wise error rates with significant FDRs at .05. The empirical data verifying a significant relationship between Exercise of Self-Care Agency and compassion satisfaction can promote positive social change through positive psychology. By revealing that as the exercise of self-care agency increases, the social worker's compassion satisfaction in the workplace also increases, allows for a focus on positivity in the workplace.

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Dedication

To my mother Mamie Ann and my father Leroy, whose pride in all your children was always unmistakable, your many personal sacrifices to educate all of your children will always be remembered and appreciated. And to my husband Larry and my brothers and sisters Leroy, Timothy, Dianne and Sandra, your support through this process gave me the strength I needed to reach this point in my education. Your patience and encouragement stabilized me through the dissertation process. I could not have asked for a better family.

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Chapter 1: Introduction to the Study

In this chapter I provide an introduction, a purpose statement, and viable research questions and hypotheses for the study. This was a two-part quantitative, moderation regression designed study that incorporated an informational module as a moderating variable. Based on a review of the literature I identified a problem or a gap in the literature. I also introduce the two theories or models that framed the independent and dependent variables of the study: the compassion satisfaction/compassion fatigue model developed by Stamm (2010), which framed compassion satisfaction the dependent variable (DV), and the self-care deficit/self-care agency model developed by Orem (1985), which framed self-care agency the independent variable (IV), with self-care actions acting as the moderating variable (M), or the behavior in a three-term contingency. The theory of motivating operations framed the informational module in this study.

A major principle guiding the use of the informational module came from Michael (2007) involving motivating operations and its repertoire-altering effect. It was proposed that the self-care actions (Orem, 1985) used in this informational module could have a repertoire altering effect (Michael, 2007) on the social worker participant; this view helped focus the path of the research questions and hypotheses that guided the study. By incorporating these theories into the study, my aim was to provide enlightenment and the advancement of the proposed relationship among the variables being examined. A further discussion of these theories is found in the theoretical foundation included in Chapter 2.

This study was undertaken based on literature reviewed which revealed that the benefits of the exercise of self-care agency in the professional had received sparse attention in scholarly empirical literature and research (see Radey & Figley, 2007, p. 210) creating a gap in the field. Salloum, Kondrat, Johnco and Olson (2015) suggested that few studies had centered on the benefits of self-care empirically (p. 54). This lack of research on the benefits of self-care also extended to the social work profession.

There was a view that when the social worker is continuously exposed to the crises and traumas of clients as part of the job, the compassion and empathy (Thomas, 2013, p. 365) expended by the worker can lead to mental and physical exhaustion; and can lead to compassion fatigue (Baranowsky & Gentry, 2010; Bride, 2007; Bride & Figley, 2007; Cunningham, 2004; Fahy, 2007; Kapoulitsas & Corcoran, 2015; Krumer-Nevo, Slonim-Nevo, & Hirshenzon-Segev, 2006; Radey & Figley, 2007; Stamm, 2010) where this individual may begin to exhibit the same range of symptoms as the victims of trauma (Cornille & Meyers, 1999, p. 17). The far-reaching effects can take the form of posttraumatic stress disorder (PTSD)-like symptomology, and the reactions of the social worker may begin to mimic the disturbances of the client (Baranowsky & Gentry, 2010, p. 8; Cornille & Meyers, 1999). This phenomenon is known as both secondary traumatic stress and compassion fatigue and may include a full range of PTSD symptoms (Newell & MacNeil, 2010, p. 60). And, with compassion fatigue, the social worker may also display a "diminished capacity to function at work, home, and within personal relationships" (Baranowsky & Gentry, 2010, p. 8). The argument is that unchecked compassion stress leading to compassion fatigue may be related to the premature attrition

seen in the social work profession (Bride, 2007; Fahy, 2007). However, it is also proposed that compassion fatigue is a "natural, predictable, treatable, and preventable" (Jacobson, Rothschild, Mirza, & Shapiro, 2013, p. 457) phenomenon.

Radey and Figley (2007) suggested that compassion could be looked at as a type of continuum where it was proposed that at one end would be the outcome of compassion satisfaction, or positive affect; and at the other end would be the outcome of compassion fatigue, or negative effect. The premise of this study was that self-care is believed to have an effect on compassion stress and the outcomes that are seen on a continuum of compassion (see Figley, 2002; Radey & Figley 2007). This premise was explored through the lens of self-care agency, and the relationship among variables was explored through a quantitative, moderation regression designed study.

The main focus was on quantitative analysis as it related to the social worker professional. Further, it was proposed that the self-care actions, a component of self-care agency, was a key in producing a variance in measurement of the construct of compassion satisfaction where self-care actions functioned as the moderating variable; and it was proposed that this process could be observed with the assistance of an informational module.

The work of de Jesus Silva et al. (2009) helped me form the suggestion that the actions of self-care are acquired, or learned abilities, and this tended to support the rationale for the use of an informational module in this study. I targeted enhancing the social worker participant's current repertoire through education. Godfrey (2010) posited that understanding how self-care related to the social work population would contribute

to the knowledge about factors that would influence the adoption, and maintenance of self-care practices in the social worker professional. Additionally, it was assumed that self-care actions and behaviors were learned behaviors (Godfrey, 2010, p. 28); that "self-care activities [were] learned by the individual and oriented towards a certain goal" (Gilbert, 2007, p. 692) or outcome; and if the social worker exercises self-care agency, he or she performed self-care actions, which would lead to the achievement of the goal-oriented outcome (Sousa. 2002, p. 3) like compassion satisfaction.

In this study, self-care agency, the IV was measured by the Exercise of Self-Care Agency Scale developed by Kearney and Fleischer (1979). And, for the purpose of this study, the focus was on those participants who scored a level of proficiency of from 80% to 100% on the *Tools for Trauma: A CBT Approach* informational module, which was the M. Additionally, Cooper, Heron, and Heward (2007) showed that by providing intervals between the pretest, informational module, and the posttest, the program group participant was given the opportunity use the acquired knowledge in the natural environment. The structure of the pretest, posttest, control group design in this study put the program group of social workers' repertoire of acquired skills from the module "into contact with naturally occurring contingencies of reinforcement" (p. 243) in the natural environment. The posttest scores of the same participants scores measured in the pretest revealed any variance in the variable relationships with the dependent variable, which were the result of the informational module. Cooper et al. (2007) suggested that the best way to evaluate the social validity of the social worker's "newly acquired behavior would be to put it to an authentic test in the natural environment" (p. 243). It should be noted

that the control group was offered the same informational module at the close of the data gathering stage of this study.

Although Gilbert (2007) suggested that self-care actions could act as a moderator in this study, it also posited that before the social worker performs the activity where deliberate self-care acts as a moderator, it must first be proven to the social worker participant that the consequences are meaningful. Gilbert presented that education provided the meaning needed for these participants. It was proposed that this study provided training and education within a specified interval, and also provided the social worker participant an opportunity to apply skills learned through this study to their real-life job situation.

In the moderation regression design, I examined four relationships using four research questions centering on (a) the IV to DV relationship, (b) the IV to moderator relationship, (c) the moderator to DV relationship, and (d) the IV to DV relationship, when controlling for M. In the data gathering phase of this study, the target group of participants was limited to current members of a roster of professional social workers in a chosen state. Participants were those who had practiced the phenomenon of compassion and who were currently practicing social work. I used a pretest–posttest control group comparison strategy for data gathering analyzed through a t test design.

There was a stipulation in this design that both groups must come from a single continuous pretest distribution. The division between the control group and the program group was decided randomly where the participants were selected for the two different groups using even and odd numbers assignment. I used the Research Randomizer

program for randomizing participant selection enabling the use of even and odd number

selection criteria for group participation. Participants chosen for this study had

voluntarily agreed to participate in the initial survey, an informational module, and a

follow-up survey.

The module was a 4 session, online, informational module that could be

completed in one weekend, but was offered as self-paced which was more convenient for

the participants. This program was designed for mental health care professionals with at

least a Master's degree (or degree in progress), or 4 years of counseling work with on-

going supervision, where the professional could include therapist/counselors,

psychiatrists, psychologists, clergy, social workers, employee assistance professionals,

clinical supervisors and other helping professionals (see Traumatology Institute, 2010, p.

1). To participate in the informational module used for this study, it was necessary for

participants to meet specific qualification to register for the module which will be

discussed later in the chapter.

Potential social implications of this study include (a) an understanding how self-

care agency is perceived in the social work population can contribute to the knowledge

and maintenance of self-care "as well as the adoption of self-care behaviors [or self-care

actions] to meet different requisites" (Godfrey, 2010, p. 80); and (b) an understanding of

self-care agency and self-care deficit can advance the knowledge of how self-care actions

can be practically applied to the social worker's relevant work environment. An

understanding of the importance of self-care agency as it relates to compassion

satisfaction can lead to positive social change where there may be the realization of

improved social worker mental health (Fredrickson & Losada, 2003; Harr & Moore, 2011) whereas a better understanding may lead to compassion satisfaction in the social worker and improved social worker retention on the job (Bride, 2007; Fahy, 2007).

Background

When exploring the construct of compassion, a review of the literature showed that there are multiple terms used to describe the same constructs, and these terms are often used interchangeably. Therefore, selected models relating to compassion and self-care were compiled to help shape the research questions. For the professional social worker working with clients who are traumatized, Figley (2002) suggested that there is a cost of caring, being empathetic, and investing oneself emotionally with clients who are suffering and these individuals may disregard their own self-care needs which can lead to compassion fatigue. Stamm (2002) helped shape the theoretical framework for this study. Most important was her proposal that it is not possible to understand the negative aspects of compassion fatigue without knowledge about the positive in terms of compassion satisfaction. This seems to be reflected in Harr and Moore's (2011) suggestion that compassion satisfaction is believed to contribute to the mental, physical, and spiritual well-being of helping professionals, and may also mitigate the negative effects of burnout and compassion fatigue (p. 357).

In this study, the professional social worker with at least a Master's degree or equivalent was the target participant. When examining this population, the literature reviewed showed that the social worker may choose the profession of social work because of the satisfaction derived from helping others (Harr & Moore, 2011). However,

work with traumatized clients can negatively affect some professional social workers (Bride, 2007; Bride, Radey, & Figley, 2007; Krumer-Nevo et al., 2006; Radey & Figley, 2007). Smart et al. (2014) suggested that the affected social worker can experience profound emotional reactions when attending to the traumatized client (p. 3), and if left unchecked, it can lead to permanent changes in the social worker's compassionate ability (p. 4), highlighting the seriousness of being secondarily traumatized.

Fahy's (2007) literature suggested that there is a poor understanding of the effects of the interaction between the social worker and the traumatized client, and that the social worker does not have adequate support, creating a gap in the field. Additionally, King and Holoako (2012) relayed that "empathy is a core principle of social work [However] minimal research has been undertaken by social work researchers" (p. 174) and, as a result, this literature relayed the value of understanding the constructs under study.

Stamm (2010) observed that empathy and compassion were related constructs. Notably, in the reviewed literature, the terms tended to be used interchangeable when discussing a possible psychology of compassion. Furthermore, the literature I reviewed suggested that there has been a history of a lack of conceptual clarity in the terms used to discuss compassion (see Adams, Boscarino, & Figley, 2006, p. 104; Harr & Moore, 2011, p. 351); and, consequentially, there may be difficulty in understanding and interpreting existing research (see Elwood, Mott, Lohr, & Galovski, 2011, p. 26).

There was current literature to suggest a conceptual framework shift where research focused on positive elements that lead the social worker towards flourishing in the profession (see Harr & Moore, 2011, p. 351; Radey & Figley, 2007; Stamm, 2010).

And, although there were few studies to date that had been conducted on compassion satisfaction in the professional as a separate concept, there was literature that focused on human flourishing (Fredrickson & Losada, 2003; Isik & Üzbe, 2015), and Godfrey (2010) supported the contention that an improved senses of well-being, functioning, and quality of life could be achieved through self-care (p. 159). And, while Radey and Figley (2007) advocated for self-care pertaining to compassion fatigue, Goncher, Sherman, Barnett, and Haskins (2013) highlighted the importance of self-care suggesting that self-care is a core foundational and functional competency in professional practice, and an ethical imperative (p. 54). And, an examination of the assemblage of the literature tended to frame the value of ethical practice in the social work profession, which includes self-care.

Stamm (2010) proposed that when one experiences compassion satisfaction, one acts with deep empathy and sorrow for the suffering of others, whereas empathy is considered a tool that the social worker uses frequently to establish a healing relationship (Baranowsky & Gentry, 2010, p. 8) with the traumatized client. Stamm (2002) also suggested that compassion is feeling and acting with "deep empathy" and sorrow for those who suffer (p. 107). Therefore, the concept of empathy was included in the literature review as a concept related to compassion. It was proposed by Baranowsky and Gentry (2010) that a professional, like the social worker, uses empathy to connect with traumatized clients. And, when researching empathy as it relates to the social worker, one can discover terms like empathetic engagement (Bride et al., 2007) an emotional investment (Figley, 2002) or affective sharing (Thomas, 2013) with the traumatized

client. However, although empathy was proposed to be at the core of social work (King & Holoako, 2012), it can, in some instances, lead to the same disturbances that fall under the umbrella of a psychology of compassion related to negative affect; and, the literature review showed that empathy can cause both cognitive and affective disturbances (Houston, 1990) in the social worker.

When focusing on compassion satisfaction, Finnigan (2008) proposed the compassion satisfaction deals with the nature of one's work and Stamm (2010) proposed that it deals with being satisfied with one's job. Harr and Moore (2011) relayed that compassion satisfaction contributes to mental, physical, and spiritual well-being of the individual; and Stamm suggested that with compassion satisfaction there is also "a sense of positivity involving the perception of one's abilities; positivity about one's colleagues in the work place; and a desire to continue in that particular profession"(p. 26). From these contentions, I was able to build on to the definition of compassion satisfaction by focusing on the references to positivity. I was able to associate positive affect with the definition of compassion satisfaction. The definition of positive affect given by Isik and Üzbe (2015) defined positive affect as "a combination of joviality, mental alertness, willingness, and determination" (p. 588); while Fredrickson and Losada's (2003) proposed that the quality of positive affect can predict resiliency and behavioral flexibility. This tended to correspond to the positivity proposed by Stamm. A review of the literature indicated that the term affect tends to refer to the quality of emotions and moods (Miner, Glomb, & Hulin, 2005, p. 171).

Radey and Figley (2007) defined compassion stress as "the stress connected with exposure to a sufferer" (p. 207); and Craig and Sprang (2010) suggested that stress can produce exhilaration, high motivation, mental alertness, and sharp perception. (p. 319). However, too much stress can harm the individual (Craig & Sprang, 2010); "too often the levels of stress become excessive and threaten to overwhelm the professional's self-efficacy" (Craig & Sprang, 2010, p. 319). This supported the contention by both Figley (2002) and Çivitci (2015) that there is a cost of caring and empathic engagement for the individual like the professional social worker, where the job of social work can negatively affect this professional (Bride, Radey, & Figley, 2007; Krumer-Nevo et al., 2006; Radey & Figley, 2007). Bride (2007) provided a justification for research on dealing with compassion fatigue and the social worker proposing that experiencing secondary traumatic stress was a reason that social workers and other human services workers left their jobs prematurely; however, Lusk and Terrazas (2015) suggested that a key to coping with repeated contact with traumatized clients is to build positive affect (p. 261). Fredrickson and Losada's (2003) discussion on positive affect helped support the discourse on compassion satisfaction that positive affect tends to equip an individual with an adaptive bias to approach and explore novel situations. Further, they proposed that optimal mental health tended to be associated with high ratios of positive to negative affect which underscores the importance of human flourishing. Radey and Figley discussed the psychology of compassion where the subconstructs of compassion helped build the framework for this study: compassion satisfaction and compassion fatigue. However, the literature reviewed suggested that compassion fatigue could be further

divided into two parts, and both Adams et al. (2006) and Baranowsky and Gentry (2010)

proposed that compassion fatigue includes two components: secondary traumatic stress,

and burnout.

Stamm (2010) proposed that burnout is the part of compassion fatigue that it is

characterized by feelings of unhappiness, disconnectedness, and insensitivity to the work

environment. Maslach (1976) proposed that burnout is an uneasy relationship at work,

whereas Maslach and Jackson (1981) termed it a syndrome of exhaustion. In an affected

social worker, one may observe exhaustion, feelings of being overwhelmed, bogged

down, being 'out-of-touch' with the person he or she wants to be, while having no

sustaining beliefs (Stamm, 2010, p. 21). Vicarious traumatization was also one of the

terms frequently associated with secondary traumatization or compassion fatigue in the

literature.

Vicarious traumatization was theorized as having a "cumulative, transformative

effect" (Devilly, Wright, & Varker, 2009, p. 374) on the social worker professional. And,

within the concept of vicarious traumatization, the transformation in the social worker

may result from empathetic engagement with the client (Bober & Regehr, 2006;

Sansburg, Graves, & Scott, 2015; van Minnen & Keijsers, 2000). One may observe a

shift from the social worker's own views to the client's traumatic affect (Sansburg et al.,

2015, p. 115). Clemans (2005) proposed that, with vicarious traumatization, there is an

"emotional, physical, and spiritual transformation" (p. 57) where the social worker

professional may begin to take in the client's emotions, experiences, and reactions

(Dombo & Gray, 2013). And, if the social worker fails to contain reactions to the client's

emotions, the social worker may become susceptible to belief system changes (Miner et al., 2005, p. 115). The review of the literature indicated a variety of responses that characterized vicarious traumatization (Bober & Regehr, 2006; Clemans, 2005; Cox & Steiner, 2013; Craig & Sprang, 2010; Cunningham, 2004; Dane & Chachkes, 2001; Devilly et al., 2009; Dombo & Gray, 2013; Howlett & Collins, 2014; Levin & Greisberg, 2003; Miner et al., 2005; Naturale, 2007; Newell & MacNeil, 2010; Sansbury et al., 2015; van Minnen & Keijsers, 2000) with physiological effects that included reduced energy levels or sleep disturbances (Howlett & Collins, 2014, p. 181); nightmares (vann Minnen & Keijsers, 2000, p. 190); intrusive thoughts (vann Minnen & Keijsers, 2000, p. 190); intrusive images of violence (Clemans, 2005, p. 57); becoming hypervigilant (Dombo & Gray, 2013, p. 91); seeing the world in a negative way, feeling unsafe, [and] "a reduced sense of self, a reduced connection to work, less interest in others, or … increased negative affect" (Miner et al., 2005, p. 115).

A review of the literature favorably addressed the need for self-care in the professional social worker, and the self-care deficit nursing model was chosen to examine self-care in relation to compassion satisfaction. Pooler (2011) proposed that "self-care undergirds professional flourishing" (p. 441); and de Jesus Silva et al. (2009) suggested that every health care professional must take care self, in order to take care of someone else (p. 693). It was proposed that self-care actions would have an effect on compassion stress (see Figley, 2002; Radey & Figley, 2007) and the outcomes observed in a psychology of compassion.

The self-care deficit nursing theory developed by Orem (1980) framed the independent variable of self-care agency (Sousa, 2002, p. 1). And, within the self-care deficit theory are the subconstructs of self-care and self-care agency, where self-care agency was the focus of this study. Self-care agency is perceived as a 'complex acquired capability', or learned ability, for action that is activated in the performance of operations of self-care (McBride, 1987; Nahcivan, 2004); and where deliberate actions of self-care are undertaken in order to meet demands that arise out of the need for care (McBride, 1987, p. 8).

Self-care was also defined as the "ability to learn self-care behaviors (psychological factors, cognitive skills, physical and emotional factors)" (Godfrey, 2010, p. 167), or actions, where consequent behavior could be an increase in well-being and functionality (p. 167) which it is proposed would include compassion satisfaction. And, to support this position, the study looked at the relationship between self-care agency and compassion satisfaction through self-care actions. It was therefore proposed that self-care actions consisted of learned behaviors that regulate integrity, functioning, and development (Leenerts, Teel, & Pendleton, 2004, p. 356; McBride, 1987, p. 6).

Motivating operations (Michael, 2007) focusing on the social worker's repertoire guided the theory of learning in this study. A motivating operation, or establishing operation, is "an environmental variable that (a) alters (increases) the reinforcing effectiveness of some stimulus, object, or event, and (b) alters (increases) the current frequency of all behavior that has been reinforced by that stimulus, object, or event" (Cooper et al., 2007, p. 375). This framework of applied behavioral analysis was used to

examine and interpret the learning in the informational module entitled *Tools for Trauma: A CBT Approach* (Baranowsky & Gentry, 2010). This module was chosen for this study because it appeared to incorporate an applied behavior analytical framework. Within the behavior analytical framework, three basic stages of Efficient Learning (Gilbert, 2007, p. 289) and the concept of Knowledge Progression (Gilbert, 2007) were used in Chapter 2 to discuss the learning. I proposed that the objectives of the informational module in this study focused on operant behavior, where "operant behavior can be selected, shaped, and maintained by the consequences" (Cooper et al., 2007, p. 31); and where operants are defined functionally, by their effects. It was an assumption that behavior continually changes as a result of the consequences (Cooper et al., 2007, p. 31). Godfrey et al. (2011) provided the suggestion that "self-care involves a range of care activities that one engages in deliberately throughout life to promote physical, mental, and emotional health (p. 11); and Sousa (2002) proposed that "self-care agency [is] a condition which human beings initiate to sustain self-care" (p. 3). The proposal that self-care actions are learned was an overarching presumption for an informational module.

The literature reviewed suggested that there has been a history of a lack of conceptual clarity in the terms used to discuss compassion which tended to be supported by various researchers (Adams et al., 2006; Austin, Goble, & Byrne, 2009; Baird & Kracen, 2006; Baranowsky & Gentry, 2010; Dane & Chachkes, 2001; Elwood et al., 2011; Harr & Moore, 2011; Howlett & Collins, 2014; James, 2008; Newell & MacNeil, 2010; Sprang, Clark, & Whitt-Woosley, 2007; Stamm, 2010; Thomas, 2013). There has also been difficulty in understanding and interpreting existing research (Elwood et al.,

2011, p. 26); and there has been difficulty in synthesizing many research findings and building evidence-based theory (Baird & Kracen, 2006) surrounding the construct of compassion and its subconstructs. As suggested by Sprang et al. (2007), my review of the literature also provided only a few epidemiological studies on the topic of compassion fatigue or secondary trauma among different groups of professionals (p. 261) and found even fewer studies conducted focusing on the social worker professional as an individual group (Tabaj, Pastirk, Bitenc, & Masten, 2015).

Cunningham (2004) tended to support the use of the proposed informational module suggesting that training in the theories of trauma and its impact would increase the effectiveness of the practitioner. And, the review of the literature suggested that training in trauma work would provide a theoretical framework that may help the practitioner understand which interventions to use when experiencing compassion stress. Additionally, it is proposed that (a) compassion fatigue is a "natural, predictable, treatable, and preventable" (Jacobson et al., 2013, p. 457) phenomenon; (b) where self-care is believed to have a positive effect on compassion stress that leads to compassion fatigue (Figley, 2002; Radey & Figley 2007); and (c) promoting compassion satisfaction enhances the social worker's ability to flourish and remain on the job (Harr & Moore, 2011).

Research on self-care and the professional social worker has not been largely addressed in empirical research creating a gap in the field, even though it was proposed that self-care could promote compassion satisfaction, and could be a prime motivator for continued work in the field of social work. This study questioned the relationships of

self-care actions, self-care agency, and compassion satisfaction using four research questions in a pretest-posttest control-group, quantitative design with moderation regression and *t* tests strategies for data analysis that incorporated an informational module of study. Therefore, based on existing literature, it was proposed that a study of a moderation relationship between self-care agency, self-care actions, and compassion satisfaction was merited**.**

Problem Statement

The benefits of the exercise of self-care agency in the professional has received sparse attention in scholarly empirical literature and research (Radey & Figley, 2007) creating a gap in the field, and Salloum et al. (2015) suggested that few studies to date had centered on the benefits of the professional's self-care empirically (p. 54). This lack of research on the benefits of self-care also extended to the social work profession, even though self-care is considered an "ethical imperative" (Goncher et al., 2013, p. 54), and is considered a core foundational and functional competency in professional practice, including the practice of social work. There was an existing view that when the social worker is continuously exposed to the crises and traumas of clients as part of the job, the compassion and empathy (see Thomas, 2013) expended by the worker can lead to mental and physical exhaustion; and can lead to compassion fatigue (Baranowsky & Gentry, 2010; Bride, 2007; Bride & Figley, 2007; Craig & Sprang, 2010; Cunningham , 2004; Fahy, 2007; Kapoulitsas & Corcoran, 2015; Krumer-Nevo et al., 2006; Radey & Figley, 2007; Stamm, 2010).

Radey and Figley (2007) proposed a psychology of compassion suggesting that the construct of compassion can be viewed as a continuum: at one end is the outcome of compassion satisfaction or positive affect and at the other end is outcome of compassion fatigue, or negative affect. The argument is that unchecked compassion stress leading to compassion fatigue may be related to the premature attrition seen in the social work profession (Bride, 2007; Fahy, 2007). However, Figley (2002) suggested that compassion fatigue is highly treatable once the social worker recognizes it and act accordingly (p.1436).

In the existing literature, I can also identify an increasing interest in the construct of self-care related to the professional. However, there continues to be a gap in the presentation of empirical data related to the professional's self-care (Salloum et al., 2015), especially in the professional social worker. And, even though there was sparse empirical literature dedicated to the subject of self-care of the professional as a whole, there was literature to suggest that self-care can positively affect the social worker leading to compassion satisfaction (Radey & Figley 2007); and that the lack of self-care may lead to compassion fatigue (Figley, 2002), further suggesting that there may be a relationship between self-care and a continuum of compassion.

In my study, I examined whether that self-care agency, in the form of self-care actions, could have a significant effect on the outcome characterized as compassion satisfaction (see Figley, 2002; Radey & Figley 2007). To support the argument that little is known about how self-care affects a continuum of compassion, the literature of Slicum-Gori, Hemsworth, Carson, and Kazanjian (2011) suggested that "very little is

known about the factors or variables that promote or limit the positive outcomes

associated with practicing compassion" (p. 172), thus illuminating a gap in the field.

Therefore, I aimed to add to the empirical literature by examining the variables of self-

care agency and self- care actions and their effect on promoting or limiting compassion

satisfaction by using a quantitative regression and moderation regression and *t* tests

designed analytical study.

Purpose of Study

I conducted quantitative research with regression and moderation regression

analyses structured around the informational module seeking to shed light on the

relationship between self-care agency (IV), self-care actions (M), and compassion

satisfaction (DV). First, self-care agency was divided into four focal predictors and they

were considered additional independent variables (IVs) or covariates in this study. Here, I

examined the contingent nature of the association between self-care agency and

compassion satisfaction (see Hayes, 2013, p. 244). I also looked at self-care agency's

contingent nature with secondary traumatic stress and burnout. I used two predeveloped

survey tools to collect, measure, and analyze the data. The Professional Quality of Life

Scale Version 5 (Stamm, 2009) was the instrument used to assess compassion and its

subconstruct of compassion satisfaction through discrete scales (see Appendix B); and

the construct of self-care agency was measured through the use of the Exercise of Self-

Care Agency Scale developed by Kearney and Fleischer (1979) (see Appendix C).

One intention of this study was to conduct a moderation regression analysis and *t*

tests analysis on the contingent nature of the variables under study employing an

informational module. The informational module in this study provided knowledge,

principles, and skills related to cognitive behavioral therapy (CBT) that could function as

a tool for the social worker's efforts with survivors of trauma (see Traumatology

Institute, 2010, p. 5) and the social worker personally. For this study, the module was

delivered through an online format. This informational module functioned as the

moderator variable (M) where the participants became aware of underlying principles

used in a recovery format for the traumatized (see Gentry, Baranowsky, & Dunning,

1997; 2002) to increase the participant's knowledge of theory and understanding of

recovery interventions that could lead to compassion satisfaction. The structure of the

informational module allowed for the examination of practical applications of self-care

skills attained where empirical data was collected through a secured online computer

assisted data collecting process. This study also offered anonymity for the participant.

Within the Exercise of Self-Care Agency Scale I measured the four subconstructs:

(a) the individual's motivation, (b) an active versus a passive response to situations, (c)

the knowledge base of the individual, and (d) the individual's sense of self-worth (see

Kearney & Fleischer, 1979, pp. 26-27; Riesch & Hauch, 1988, p. 245). Each division was

also thought of as a predictor, or a focal predictor.

Research Questions and Hypotheses

The research questions and hypotheses for this study evolved from an

examination of how linear regression analysis, allowing for multiple independent

variables, could shed light on the relationship between variables, including a modifier in

a three-way contingency. When testing the hypotheses through moderation regression, I

was able to include the product of the exercise of self-care agency and compassion

satisfaction along the exercise of self-care agency's effect on self-care actions, allowing

the exercise of self-care agency's effect on compassion satisfaction to depend linearly on

self-care actions (Hayes, 2013, p. 244). Hayes (2013) explained that if I established this

type of dependency or contingency, I would be able to discuss the exercise of self-care

agency's effect on compassion satisfaction as well as self-care actions' effect (p. 244).

I addressed the following combinations of variables:

- The independent (or predictor) variable to the dependent variable relationship (IV

  to DV).

- The independent (or predictor) variable to the moderator relationship (IV to M),

- The moderator to dependent variable relationship (M to DV).

- The independent variable to the dependent variable, when controlling for the

  moderator (M).

The original research questions and hypotheses were as follows:

RQ1: Is there a statistically significant linear relationship between the exercise of

self-care agency and compassion satisfaction in the population under study?

$H_0 1_1$: There is not a statistically significant linear relationship between the exercise of

self-care agency *(IV-1)* and compassion satisfaction in the population under study?

$H_a 1_1$: There is a statistically significant linear relationship between the exercise of

self-care agency *(IV-1)* and compassion satisfaction in the population under study?

$H_0 1_2$: There is not a statistically significant linear relationship between the exercise of

self-care agency 2 *(IV-2)* and compassion satisfaction in the population under study?

H_a1_2: There is a statistically significant linear relationship between the exercise of self-care agency 2 *(IV-2)* and compassion satisfaction in the population under study?

H_01_3: There is not a statistically significant linear relationship between the social worker's motivation (*IV-3*) and compassion satisfaction in the population under study (*DV-1*).

H_a1_3: There is a statistically significant linear relationship between the social worker's motivation (*IV-3*) to compassion satisfaction in the population under study (*DV-1*).

H_01_4: There is not a statistically significant linear relationship between an active versus a passive response to situations (*IV-4*) and compassion satisfaction in the population under study (*DV-1*).

H_a1_4: There is a statistically significant linear relationship between an active versus a passive response to situations (*IV-4*) and compassion satisfaction in the population under study (*DV-1*).

H_01_5: There is not a statistically significant linear relationship between the knowledge base of the social worker (*IV-5*) to compassion satisfaction in the population under study (*DV-1*).

H_a1_5: There is not a statistically significant linear relationship between the knowledge base of the social worker (*IV-5*) and compassion satisfaction in the population under study (*DV-1*).

H_016: There is not a statistically significant linear relationship between the social worker's sense of self-worth (IV-6) and compassion satisfaction in the population under study (*DV-1*).

H_a16: There is a statistically significant linear relationship between the social worker's sense of self-worth (*IV-6*) and compassion satisfaction in the population under study (*DV-1*).

RQ2: Is there a statistically significant relationship between self-care actions (M) and the Exercise of Self-Care Agency *(IV)* in the population under study?

H_02_1: There is not a statistically significant linear relationship between self-care actions (M) and the exercise of self-care agency in the population under study?

H_a2_1: There is a statistically significant linear relationship between self-care actions (M) and the exercise of self-care agency in the population under study?

H_02_2: There is not a statistically significant linear relationship between self-care actions (M) the exercise of self-care agency 2 in the population under study?

H_a2_2: There is a statistically significant linear relationship between self-care actions (M) and the exercise of self-care agency 2 in the population under study?

H_02_3: There is not a statistically significant relationship between self-care actions (M) and the social worker's motivation (*IV-2*) in the population under study (*M*).

H_a2_3: There is a statistically significant relationship between self-care actions (M) the social worker's motivation (*IV-2*) in the population under study (*M*).

H_02_4: There is not a statistically significant relationship between self-care actions (M)

an active versus a passive response to situations (*IV-1*) in the population under study

(*M*).

H_a2_4: There is a statistically significant relationship between self-care actions (M) an

active versus a passive response to situations (*IV-1*) in the population under study

(*M*).

H_02_5: There is not a statistically significant relationship between self-care actions (M)

and the knowledge base of the social worker (*IV-3*) in the population under study (*M*).

H_a2_5: There is a statistically significant relationship between self-care actions (M) and

the knowledge base of the social worker (*IV-3*) in the population under study (*M*).

H_02_6: There is not a statistically significant relationship between self-care actions (M)

and the social worker's sense of self-worth (*IV-4*) in the population under study (*M*).

H_a2_6: There is a statistically significant relationship between self-care actions (M) and

the social worker's sense of self-worth (*IV-4*) and self-care actions (*M*).

RQ3: Is there a statistically significant relationship between self-care actions (*M*) and

compassion satisfaction (*DV*) in the population under study?

H_03_1: There is not a statistically significant relationship between self-care actions (*M*)

and compassion satisfaction in the population under study (*DV-1*).

H_a3_1: There is a statistically significant relationship between self-care actions (*M*) and

compassion satisfaction in the population under study (*DV-1*).

RQ4: Is there a statistically significant relationship between self-care agency (*IV*) and compassion satisfaction (*DV*) in the social worker population when controlling for the self-care actions (*M*) in the population under study?

H_04_1: There is not a statistically significant relationship between the exercise of self-care agency (*IV*) and compassion satisfaction (*DV*) in the social worker population when controlling for the self-care actions (*M*) in the population under study?

H_a4_1: There is a statistically significant relationship between the exercise of self-care agency (*IV*) and compassion satisfaction (*DV*) in the social worker population when controlling for the self-care actions (*M*) in the population under study?

H_04_2: There is not a statistically significant relationship between the exercise of self-care agency 2 (*IV*) and compassion satisfaction (*DV*) in the social worker population when controlling for the self-care actions (*M*) in the population under study?

H_a4_2: There is a statistically significant relationship between the exercise of self-care agency 2 (*IV*) and compassion satisfaction (*DV*) in the social worker population under when controlling for the self-care actions (*M*) in the population under study?

H_04_3: There is not a statistically significant relationship between the social worker's motivation (*IV-2*) and compassion satisfaction (*DV-1*) when controlling for self-care actions (*M*) in the population under study.

H_a4_3: There is a significant relationship between the social worker's motivation (*IV-2*) and compassion satisfaction (*DV-1*) when controlling for self-care actions (*M*) in the population under study.

$H_0 4_4$: There is not a statistically significant relationship between an active versus a passive response to situations (*IV-1*) and compassion satisfaction (*DV-1*) when controlling for self-care actions (*M*) in the population under study.

$H_a 4_4$: There is a statistically significant relationship between an active versus a passive response to situations (*IV-1*) and compassion satisfaction (*DV-1*) when controlling for self-care actions (*M*) in the population under study.

$H_0 4_5$: There is not a significant relationship between the knowledge base of the social worker (*IV-3*) and compassion satisfaction (*DV*) when controlling for self-care actions (*M*) in the population under study.

$H_a 4_5$: There is a significant relationship between the knowledge base of the social worker (*IV-3*) and compassion satisfaction (*DV*) when controlling for self-care actions (*M*) in the population under study.

$H_0 4_6$: There is not a significant relationship between the social worker's sense of self-worth (*IV-4*) and compassion satisfaction (*DV-1*) when controlling for self-care actions (*M*) in the population under study.

$H_a 4_6$: There is a significant relationship between the social worker's sense of self-worth (*IV-4*) and compassion satisfaction (*DV-1*) when controlling for self-care actions (*M*) in the population under study.

In this study, I conducted a moderation regression analysis using statistical controls. Darlington and Hayes (2017) explained that in this type of linear model "association between two variables, (*X*) and (*Y*), can be difficult to interpret or obscured when a third variable, (*Z*), is related to both *X* and *Y*" (p. 16). I used linear regression analysis to probe

the linear relationship between self-care agency (*X*) and compassion satisfaction (*Y*). The hypotheses also proposed that the effect of the exercise of self-care agency (*X*) on compassion satisfaction (*Y*) could be moderated by self-care actions (*M*) "if its size, sign, or strength depends on, or can be predicted by [self-care actions] (*M*)" (Hayes, 2013, p. 208); that self-care actions is a moderator of the exercise of self-care agency's effect on compassion satisfaction; and that self-care actions and the exercise of self-care agency interact in their influence of compassion satisfaction (Hayes, 2013, p. 208).

I also used a randomization procedure on self-care agency's (*X*'s) assignment before data collection. Therefore, this moderation regression designed study used a two-group pretest-posttest control group model and random participant selection. Those randomly selected with even ID numbers were the program group and were exposed to the informational module first. The second group was considered the control group and was offered the same informational module at the completion of the study.

Jaccard (2001) proposed that the interaction effect is in the moderating effects of quantitative/continuous predictors like self-care agency. And, to examine this contention, I examined "a two-way interaction and then a three-way interaction" (p. 42) and made a case for each. Jaccard's work further explained that the impact of self-care agency will be greater as self-care actions increase. By decomposing the Exercise of Self-Care Agency Scale into its smaller composite scales, I had an interactive model with four quantitative/continuous predictors of the exercise of self-care agency, with the moderating variable of self-care actions considered as a fifth dichotomous variable.

For this quantitative study, I used the IBM SPSS Statistical Software to analyze the raw quantitative data attained through online data collection. Additionally, I incorporated the PROCESS macro into the SPSS program. However, with the small sample size, the PROCESS macro was used in the study to compare the results found in the moderation regression. I used an alternate method to observe for a moderated effect. I used a general linear model univariate test to analyze the effect of the informational module on the posttest scores. In a general linear model, univariate, pairwise examination of the posttests of the exercise of self-care agency and compassion satisfaction, an F test was used to test the effect of the informational module and these variables. This allowed me to use a form of linear regression analysis with the posttest compilations where the results were measured, analyzed, and reported by a strength or magnitude criteria.

Regression analysis was performed on all the subconstructs of self-care agency and all the construct of compassion for additional analysis and interpretation. I examined under what circumstances self-care agency exerted an effect on compassion satisfaction (see Hayes, 2013, p. 244). I used simple regression, followed by multiple regression analysis to test the null hypotheses for inference. For an examination of the interaction effect, the moderation regression analysis centered and reported on the subconstruct of compassion satisfaction (DV-1) and its relationship with self-care agency, and its related factors, and self-care actions.

In reference to the null hypothesis in the regression, I estimated compassion satisfaction (Y) from self-care agency (X) using linear regression. I found that, a) if self-care agency (X) and compassion satisfaction (Y) were linearly uncorrelated in the

population; and b) if self-care agency (*X*) was unrelated to compassion satisfaction (*Y*),

then self-care agency (*X*) "should be given no weight in the derivation of the estimate"

(Hayes, 2013, p. 46) of compassion satisfaction (*Y*) (p. 46). Hayes (2013) explained that

when an investigator seeks to determine whether "a certain variable influences or is

related to the size of one variables' effect on another, a moderation analysis is the proper

analytical strategy…moderation (also known as interaction) uses linear regression

analysis" (p. 207). Statistically, moderation analysis was conducted by testing for

interaction between self-care actions (*M*) and self-care agency (*X*) in a model of

compassion satisfaction (*Y*). With evidence that self-care agency's (*X*'s) effect on

compassion satisfaction (*Y*) was moderated by self-care actions (*M*), I "could then

quantify and describe the contingent nature of the association or effect by estimating" (p.

9) self-care agency's (*X*'s) effect on compassion satisfaction (*Y*) at various values of the

self-care action (*M*), also known as probing an interaction (Hayes, 2013, p. 9).

Theoretical Framework

Multiple theories guided this study. The self-care agency theory (Orem, 1985)

guided the independent variables, the compassion satisfaction/compassion fatigue theory

(Stamm, 2010) guided the dependent variable, and the motivating operations theory

(Michael, 2007) guided self-care actions (M) that functioned as the moderating variable.

Both the ProQOL Scale (Stamm, 2009) and the Exercise of Self-Care Agency Scale

(Kearney & Fleischer, 1979) are validated theory-based questionnaires.

Compassion Satisfaction: The Dependent Variable

The dependent variable of compassion satisfaction was based on theories surrounding the compassion satisfaction/compassion fatigue model developed by Stamm (2016). Figley (2002) first introduced the model of compassion fatigue in 1995. As the theory of compassion fatigue evolved, researchers like Stamm have elaborated that research over the past 20 years and have helped refine the construct clarifying a theory of compassion satisfaction and compassion fatigue that was created as a data informed model. Stamm (2002) also shaped the foundation of this study where she posited that one cannot fully understand compassion fatigue without also understanding compassion satisfaction because some social workers are doing well; that it is not possible to understand the negative aspects of compassion fatigue without knowledge about the positive in terms of compassion satisfaction and positive affect.

Stamm (2010) helped me further understand the concept of compassion through the professional quality of life. Stamm (2002) proposed that, to holistically understand compassion in professionals like the social worker, one must also look at the interaction of both compassion satisfaction and compassion fatigue, or the compassion satisfaction/compassion fatigue model. The ProQOL Scale Version 5 (Stamm, 2009) was based on this model, and its discrete compassion satisfaction scale was used to help answer the research question concerning self-care agency as a significant predictor of compassion satisfaction in the social worker population under study to the degree that one would observe a variance in compassion satisfaction.

In his theories of compassion fatigue, Figley (2002) proposed the following

- The compassion fatigue model is based on the assumption that "empathy and emotional energy are the driving force in working with the suffering in general, including establishing and maintaining an effectively therapeutic alliance, and delivering effective services and an empathetic response" (Figley, 2002, p. 1436);

- "The very act of being compassionate and empathetic extracts a cost under most circumstances ... [that] in our effort to view the world from the perspective of the suffering, we suffer" (Figley, 2002, p. 1434).

- Compassion fatigue is defined as "a state of tension and preoccupation with the traumatized patients by re-experiencing the traumatic events, avoidance/numbing of reminders, persistent arousal (e. g. anxiety) associated with the patient" (Figley, 2002, p. 1435). It is a function of bearing witness to the suffering of others (p. 1435).

- Compassion fatigue is highly treatable once the worker recognizes it and acts accordingly (p. 1436).

Adding to the development of the dependent variable were the theories of Stamm (2010) which proposed that

- The professional quality of life measure incorporates two aspects, the positive (compassion satisfaction) and the negative (compassion fatigue). Compassion fatigue also breaks into two parts. (a) Exhaustion, frustration, anger and depression are typical of burnout, and (b) and negative feeling driven by fear and work-related trauma which are typical of secondary traumatic stress (Stamm, 2010, p. 8). Secondary traumatic stress is about work-related, secondary exposure

to people who have experienced extremely or traumatically stressful events (p. 13); and secondary traumatic stress (STS) is an element of compassion fatigue (CF) (p. 13).

- Compassion satisfaction is the positive aspects of helping others (p. 10).

My goal was to build on the theories of Figley (2002) and Stamm (2002) by examining them in to relation to self-care agency, a component of the self-care /self-care deficit model, as explained by Orem.

Self-Care Agency: The Independent Variable

The independent variable of self-care agency was based on theories surrounding the Orem's (year) self-care deficit model. The self-care deficit nursing theory developed by Orem (1980; 1985) (Sousa, 2002, p. 1) was the underlying principle that guided the examination of the relationship between self-care and compassion satisfaction seeking to answer all four research questions.

The variable of self-care agency was examined by the Exercise of Self-Care Agency Scale developed by Kearney and Fleischer (1979) which was based on the theories proposed by Orem. A justification for this study came from the work of Sousa (2002) who relayed that

> There have only been a few studies that have examined the relationship between self-care agency and outcome… [where] self-care actions are mediators between self-care agency and goal-oriented outcomes, [suggesting] that if someone exercises self-care agency, he or she performs self-care actions which would lead to the achievement of a desired outcome. (p. 3)

like compassion satisfaction.

It appears that one can interpret Orem's ideas at both at the macro and the micro levels. When synthesizing an interview conducted with Orem (Fawcett, 2001), it was conveyed by Orem that:

- Unless one has insights and workable knowledge about a process, this individual is at a loss (p. 35). There is a need of foundational knowledge (p. 35).

- And, unless one has a structured discipline, there is nowhere to come from or advance to (Fawcett, 2001, p. 36).

- If one is going to get anyplace in developing a science, one has to have a model of practice science (p. 35).

- One has to have a valid, reliable, general theory and integrate the conceptual elements of the theory with the practice operations (p.35).

- Unless one does that, one is not going to make the theory relevant to practice (p. 35).

It was proposed that self-care actions, which were the behaviors in this study, consisted of learned behaviors that regulate one's integrity, functioning, and development (McBride, 1987, p. 6). In McBride's (2002) interpretation of Orem's (1985) self-care deficit model, self-care was viewed as "the practice of activities that the individual initiates on their own behalf to maintain life and health" (p. 311). And to do so, McBride proposed that "one must have the necessary knowledge, skill, and motivation: that is, self-agency" (p. 311); and "an inability to meet the demand constitutes a self-care deficit"

(p. 311). Gatlin (2014) defined self-care agency as the ability to engage in self-care; and that certain factors can condition or effect an individual's ability to engage in self-care.

Applying Sousa's (2002) definition of self-care agency to the social worker, it was proposed that self-care agency relates to the social worker's "ability to recognize his or her own needs; to evaluate personal and environmental resources, and to determine and perform [self-care] actions to achieve a desired goal" (p. 3), which I saw as compassion satisfaction. Sousa proposed that there are 10 basic conditioning factors that influence self-care agency, two of which are personal and environmental factors (p. 2). I proposed that an understanding of self-care agency, as it relates to the psychology of compassion, can also advance the field of social work practice; that the structure of Orem's theory lends itself to expansion to other professional fields.

The Informational Module

The informational module in this study was chosen because it seemed to reflect the theories of Michael (2007) in relation to personal and environmental factors that could enhance the social worker's repertoire. This study proposed to (a) target the social worker's repertoire through this informational module (b) then expose the repertoire to a real word environment. Cooper et al. (2007) proposed that the social worker's repertoire is a collection of knowledge and skills this individual has learned that are relevant to particular settings or tasks (p. 27), and that "all behavior occurs within an environmental context" (p. 27).

For the social worker participating in the *Tools for Trauma: A CBT Approach informational module*, I sought to understand how the infusion of knowledge about the

theories of compassion and trauma, and its relation to deliberate self-care and interactive

self-care training activities, affected the outcome of compassion satisfaction in the

participants. One of the objectives of the informational module was to" add resolution

exercises to the repertoire" (Traumatology Institute, 2012, p. 1). I proposed that the

structure of this study would put the social worker's repertoire "into contact with

naturally occurring contingencies of reinforcement" (Cooper et al., 2007, p. 243) in the

natural environment.

Theories surrounding the social worker's repertoire were associated with

motivating operations which helped me frame this informational module, proposing that a

"repertoire-altering effect was an effect as a result of environmental history" (Michael,

2007, p. 377). When describing motivating operations, Michael (2007) relayed that, in

their treatment of motivation, Keller and Schoenfeld (1950) identified a drive concept

that focused on a relationship between certain environmental variables and certain

changes in behavior, which they termed establishing operations (p. 395). However, when

the Theory of Establishing Operation (EO) was reintroduced in 1982, it did not exactly

conform to their usage (Michael, 2007, p. 375); and more recently, the term motivating

operations and its characteristics have been suggested to replace the term establishing

operations (p. 375). Michael's (2007) literature on motivating operations was used in this

study.

Self-Care actions, a component of self-care agency, were the behavior targeted in

the informational module, where self-care was conceptualized as the action repertoire of

the social worker (McBride, 1987, p. 7). I focused the theories proposed by Michael's

(2007) pertaining to motivating operations, which were contained in the works of Cooper et al. (2007). Within this theory of motivating operations were the theories of value-altering effects, behavior-altering effects, and repertoire-altering effects (Michael, 2007). This study looked initially for a repertoire-altering effect.

This study also provided the opportunity for a real-world investigation where the social worker's repertoire was "put into contact with naturally occurring contingencies of reinforcement" (Cooper et al., 2007, p. 243). It was posited that automatic positive reinforcement would occur when a behavior produced a positive reinforcing consequence that was not socially motivated (p. 243); that there would be maintenance and generalization of the newly acquired behaviors (p. 243) because of the naturally occurring reinforcement in the natural environment (p. 243). Skinner (1950) proposed that "if learning is the process we suppose it to be, then it must appear so in the situations in which we study it…our measures must be relevant and comparable properties…[and] the dimensions of the changes must spring from the behavior itself" (p. 196).

Nature of Study

A rationale for this study was taken from Hayes and Matthes (2009) where these researchers proposed that "theoretical acccounts of an effect can be tested and often strengthened by the discovery of moderators of that effect…[which] is of fundamental importance to the behavioral sciences (p. 24). This rationale led to the examination of the relationships and effects between self-care agency, compassion satisfaction, and self-care actions to learn if the relationships and effects would evidence themselves through statistical control. I sought to "empircally quantify and test hypotheses about the

contingent nature of the mechanisms by which [self-care agency] (X) exerted its influence on [compassion satisfaction] (Y)" (Hayes, 2013, p. vii). I used quantitative analyses and regression, with a moderation regression design, seeking design seeking to examine and shed light upon the relationship between self-care agency (IV), the compassion satisfaction (DV) and self-care action (M) through an online computer generated data collection process. Covariates of this study included the four divisions of the independent variable of self-care agency: (a) the individual's motivation, (b) an active versus a passive response to situations; (c) the knowledge base of the individual; and (d) the individual's sense of self-worth (see Kearney & Fleischer, 1979, pp.26-27; Riesch & Hauch, 1988, p. 245).

The design of the study assisted me in determining if the moderating variable of self-care actions, presented in informational module focusing on theories and strategies encompassing compassion satisfaction and self-care agency, would produce an interaction effect. I believed that this moderation regression design would assist in enlightening me about "how the effect of antecedent variable [of self-care agency] (X) on a consequent variable of [compassion satisfaction] (Y) could 'depend' on a third variable of [self-care actions] (M)" (Hayes, 2013, p. 10). Keeping in mind my proposed continuum of compassion and the subconstruct of compassion satisfaction, I proposed and found that self-care actions functioned as the moderating variable to the extent that simple slopes elucidated the moderating effect in the variables under study.

I recruited 46 participants invited from a roster of licensed social workers. Participants were recruited by postcard. This study used a pretest – posttest comparison

group strategy and the data came from one continuous sample. Stamm (2010) supported

this suggesting that the ProQOL, the dependent variable, was best used in its continuous

form (p. 18).

The overarching aim of this quantitative, moderation regression design study was

to address the questions of significance and interaction effects of the variables under

study. Data was analyzed through linear, multiple, moderation regression which is a form

of enhanced linear regression, and hierarchical regression. Through random assignment,

participants assigned to the program or experimental group with even numbers ID's were

exposed to an interactive online informational module first. Data was collected in two

sessions allowing for repeated measures of the variables in the study. The informational

module targeted education on theories of self-care and trauma. There was an interval after

the informational module where the participant could apply the acquired knowledge in

the natural environment. A posttest measured any variance in the dependent variable of

compassion satisfaction that may have resulted of the module. Cooper et al. (2007)

suggested that the best way to evaluate the social validity of the social worker's "newly

acquired behavior is to put it to an authentic test in the natural environment" (p. 243).

Finally, I proposed that variance in the dependent variable would be revealed by a change

in value in the compassion satisfaction variable.

Definition of Terms

Antecedent: An environmental condition or stimulus change existing or occurring

prior to a behavior of interest (Cooper et al., 2007, p. 689).

Applied behavior analysis: Applied behavior analysis can be defined as "the science in which tactics derived from the principles of behavior are applied systematically to improve socially significant behavior [where] experimentation is used to identify the variables responsible for behavior change" (Cooper et al., 2007, p. 23).

Behavior: the activity of an individual (Cooper et al., 2007, p. 690).

Bootstrapping: a technique in PROCESS where "confidence intervals are implemented for inference about indirect effects, including various measures of effect size" (Hayes, 2016, p. 1).

Burnout: "Burnout is the part of compassion fatigue that is characterized by feelings of unhappiness, disconnectedness, and insensitivity to the work environment. It can include exhaustion, feelings of being overwhelmed, bogged down, being 'out-of-touch with the person he or she wants to be, while having no sustaining beliefs" (Stamm, 2010, p. 21). Maslach (1976) suggested that burnout reflects an uneasy relationship between people and their work (p. 44).

Compassion: Stamm (2002) defines compassion as feeling and acting with 'deep empathy' and sorrow for those who suffer (p. 107).

Compassion fatigue: Compassion fatigue is "a state of tension and preoccupation with traumatized patients by means of re-experiencing their traumatic events" (Figley, 2002, p. 1435); "symptoms may include avoidance or numbing reminders; and a persistent arousal-like anxiety that tends to be associated with the patient" (p. 1435), or there may be emotional affect resulting from working with traumatized clients (Yoder, 2010, p. 190). Compassion fatigue and secondary traumatic stress when used

interchangeably is described as "a natural consequence of helping others" (Elwood et al., 2011, p. 26). This is one of the dependent or outcome variables.

Compassion satisfaction (the dependent variable): With compassion satisfaction there is the experience of happy thoughts, feelings of successful, and happiness with the work that is done; and a desire to continue to doing it, with a belief that the work done can make a difference (Stamm, 2010, p. 21). This is the dependent variable or one of the outcome variables.

Compassion stress: Compassion stress is defined as "the stress connected with exposure to a sufferer" (Radey & Figley, 2007, p. 207).

Consequences: a stimulus change that follows a behavior of interest (Cooper et al., 2007, p. 692).

Empathy: "A multidimensional, processual construct" (Thomas, 2013) and "a core principle of social work" (Thomas, 2013, p. 376). The affective nature of empathy is defined as "an emotional reaction to cues transmitting the emotional experience of another (Houston, 1990) where empathy and emotional energy are the driving force when working with the suffering, and attempting to establish and maintain an effective therapeutic relationship (Figley, 2002, p. 1436).

Environment: To explain environment, Cooper et al. (2007) synthesized the work of Johnson and Pennypacker to conclude that when one speaks of environment in regard to behavior, one is speaking of a particular behavior that can include both the individual's external features as well as the events inside one's skin (p. 27); and when one describes a

particular aspect of the environment, one is speaking in terms of stimulus conditions or events (p. 27).

Moderation: Baron and Kenny (1986) explained that "a moderator is a qualitative … or quantitative variable that affects the direction and/or strength of the relation between the independent, or predictor variable, and the dependent or criterion variable" (p. 1174).

Moderator or third variable: The third variable is a variable that is examined along with the independent and dependent variable where an assumption is made that "the moderator variable always functions as the independent variable, which partitions a focal independent variable into subgroups that establish its domains of maximal effectiveness in regard to a given dependent variable" (Baron & Kenny, 1986, p. 1173). Creswell (2009) defines a moderating variable as a new variable constructed by a researcher by taking one variable and multiplying it by another variable to determine the impact of both (p. 50).

Operant behavior: Operant behavior is behavior that is initiated and controlled by will; it is also defined as behavior or it is activity that is shaped and maintained by its consequences (Cooper et al., 2007, p. 32).

Ordinary least squares (OLS): Within PROCESS developed by Hayes, OLS is "a logic regression-based path analytic framework for estimating direct and indirect effects in two and three way interactions in moderation models along with simple slopes and regions of significance for probing interactions, conditional indirect effects" (Hayes, 2016, p. 1).

Positive affect: Positive affect denotes "the combination of joviality, mental alertness, willingness, and determination" (Isik & Üzbe, 2015, p. 588) where one tends to feels energetic, enthusiastic, cheerful, active and alive (Çivitci, 2015, p. 567).

PROCESS: An add-on macro for SPSS "for statistical moderation and conditional process analysis" (Hayes, 2016, p. 1).

Secondary traumatic stress: "The natural, consequent behaviors and emotions resulting from knowledge about a traumatizing event experienced by a significant other; and the stress resulting from engaging in an empathic relationship with an individual suffering from a traumatic experience and bearing witness to the intense or horrific experiences of that particular person's trauma (Newell & MacNeil, 2010, p. 60).

Self-Care: Self-Care is a practice "directed toward the maintenance and promotion of one's health" (Mineko, 1998, p. 370) and where the self-care agent is the self-care-executing person (de Jesus Silva et al., 2009, p. 692). This is the independent of predictor variable.

Self-Care actions: Self-Care actions consist of learned behaviors that regulate integrity, functioning, and development (McBride, 1987, p. 6).

Self-Care agency (the independent variable): an individual's capabilities for self-care actions to achieve a goal-oriented outcome (Sousa, 2002, p. 2); and it is "considered a condition where the human being initiates and sustains self-care" (Sousa, 2002, p. 3).

Vicarious traumatization: Vicarious traumatization involves an "emotional, physical, and spiritual transformations" (Clemans, 2005, p. 57) that can be experienced by an individual who assists traumatized clients where this individual takes in the

emotions, experiences, and reactions of the traumatized client (Dombo & Gray, 2013, p. 90). Vicarious traumatization represents the resulting cognitive shifts in beliefs and thinking that occurs in social workers in direct practice with victims of trauma (Newell & MacNeil, 2010, p. 60).

Assumptions

Instrumentation

This study was based on assumptions pertaining to instrumentation.

Assumption of ProQOL Version 5. I assumed that the ProQOL Version 5 was a valid and reliable measure of compassion satisfaction; and that the participants would honestly and accurately answer the questions posed on the scale. It was proposed that this was a requirement for an accurate measure of the research questions.

Assumption of Self-Care Agency Scale. I assumed that the Exercise of Self-Care Agency Scale was a valid and reliable measure of self-care agency; and that the participants would honestly and accurately answer the questions posed on the scale. It was proposed that this was a requirement for an accurate measure of the research questions. Consequently, a request to honestly answer the questions was made before beginning of the measurement.

Assumptions Moderation Regression

Kenny (2015c) revealed that there are assumptions that are important when conducting regression analysis. They are (a) causality, (b) homogeneity of variance, and (c) no measurement error along with the assumption of linearity. Moderation regression assumptions include the following:

- Causality: Kenny's (2015c) discussion of causality revealed that I can think of both self-care agency (*X*) and self-care actions (*M*) as causing compassion satisfaction (*Y*). Therefore, I had an option of measuring both self-care agency (*X*) and self-care actions (*M*) before compassion satisfaction (*Y*), focusing on manipulation of the moderator. This assumption was seen in the experimental group being exposed to the informational module as part of the study and the control group not receiving the informational module until after the completion of the data collecting. This was a manipulation of the moderator. However, in this study, the variable of self-care agency (*X*) was also be manipulated through random assignment to either the control or the experimental group.

- Linearity: Kenny (2015c) emphasized the importance of linearity to the moderation regression model by relaying that "the effect of self-care agency (*X*) on compassion satisfaction (*Y*) changes by a constant amount as self-care actions (*M*) increases or decreases… that the fundamental self-care agency (*X*) to compassion satisfaction (*Y*) effect is linear" (p. 1).

- Homogeneity of Variance: Kenny (2015c) revealed that the different variance in self-care agency (*X*) for levels of self-care actions (*M*) tend not to be a problem if I compute the regression coefficients; that Equal Error Variance is a very important assumption in a moderation regression design. To meet the requirements of this assumption, Kenny (2015) suggested that I can conduct a visual examination and plot residuals against the predicted values and against self-care agency (*X*) and self-care actions (*M*) (p. 1).

- Measurement Error: Kenny (2015c) proposed that product reliability is where self-care agency (*X*) and self-care actions (*M*) have normal distributions; that bias in self-care agency (*X*) times self-care actions (*M*) is due to measurement error in self-care agency (*X*) and self-care actions (*M*); and that bias is due to different self-care agency (*X*) variance for different levels of self-care actions (*M*).

Additionally, Kenny (2015c) revealed that linear modeling method has six requirements:

- There must be a set of participants.

- Each participant must have values or measurements on two or more variables, and in this study, numerical values.

- Each variable must be represented by a single column of numbers.

- Each analysis must have just one dependent variable, though it may have several independent variables and several covariates.

- The dependent variable must be numerical, such that values can be meaningfully averaged. (p. 10)

Using the above criteria, I assumed the changes were linear. As self-care actions went up or down by a fixed amount, the effect of self-care agency on compassion satisfaction changed by a constant amount (see Kenny, 2015c).

Scope and Delimitations

Internal Validity

Campbell and Stanley (1963) relayed that when one considers the internal validity of a study, that there were eight common classes of extraneous variables that may confound the effects of the experimental stimulus used in a study. Additionally, Trochim

(2006) proposed that, when using a control group, many of the threats to internal validity can be ruled-out (p. 8). I believed that this also held true for this moderated regression designed study. And, although it was not possible to control all sources of variability in the study, I strove for the ideal (see Cooper et al., 2007, p. 160).

When focusing on internal validity, Creswell (2009) relayed internal validity pertains to the experimental procedures, treatments, and experiences of the participants (p. 162). I realized that if certain aspects of these parts of this study were not controlled, "my ability to draw correct inferences from the data about the population under study" (Creswell, 2009, p. 162) would be threatened.

In this study, the moderation regression analysis using a pretest-posttest control group design was chosen because I could appropriately test the variance theory and maintain an acceptable measure of validity in answering the research questions. I believed that the pretest-posttest group design was the best design for this study because of the information the that design produced related to interaction or moderation effects on variables in question. Conversely, the posttest only design would not have produced the continuous data needed for this study. The use of the pretest – posttest control group design controlled for all eight classes of extraneous variables that could influence internal validity.

External Validity

For external validity, I chose to use the pretest – posttest control group design and to manipulate the time interval between the administrations of the tests. A known threat to external validity and to this design was interaction of testing. I believed that allowing

at least a 45-day interval between the pretest and the posttest, and the use of a control group helped control the interaction of testing as an extraneous variable. This action also possibly reduced sensitizing of both the control and the program groups to the tests. Additionally, I realized that this threat to external validity could reduce generalizability for this study.

Interaction of selection was another threat to external validity. Campbell and Stanley (1963) relayed that random assignment could control for this threat and was made part of this study. In summarizing the findings of the study, I limited discussing the findings to the population described in the study. And, when considering reactive arrangement, I incorporated into the study the use of the normal work routine of the participants to address this concern.

I believed that in using the moderation regression design I would gain the "ability to draw correct inferences from the data about the population under study" (Campbell & Stanley, 1963, p. 56). The quantitative design was chosen because:

- It was proposed that employing only a single participant, or small number or participants would be a deviation from the group comparison designs that are traditionally used in quantitative research, where large numbers of participants are employed (Cooper et al., 2007, p. 164).

- It was proposed that a larger number of participants would control for the variability and increase the generality or external validity of the findings to the population from which the participants were drawn (Cooper et al., 2007, p. 164).

Finally, because of the narrow characteristics of participants in the program group, I would not be able to generalize to individuals who did not have the characteristics of participants (Cooper et al., 2007). Consequently, the study's initial results were limited the group from which the participants originated and not generalized to other professional populations. For future generalizations to other groups, a researcher would need to conduct additional experiments with groups with different characteristics (p. 164). However, I addressed possible generalizations using the proximal similarity model (Trochim, 2008) in Chapter 3.

Patton (2002) proposed that "validity in quantitative research depends on careful instrument construction to ensure that the instrument measures what it is supposed to measure…where the instrument is administered in an appropriate, standardized manner according to prescribed procedures" (p. 14). Additionally, Wuensch (2013) relayed that the Cronbach's alpha is "a statistic that measures the degree of internal consistency among items on a scale … [and] it can be used to estimate the reliability of the instrument" (para 1). A review of the literature indicated that Cronbach's alpha is the most common measure of a scale's reliability (Field, 2013, p. 708). Therefore, for measuring instruments, it is suggested that an acceptable value for Cronbach's alpha is .7 to .8. And, when the value is significantly lower than .7 to .8, this tends to indicate that the test developer, has to that point, not produced a reliable scale (p. 709). I used the acceptable scale value of .7 or higher in evaluating the new variables created for this study. However, it was suggested that when a developer is dealing with psychological constructs, "values below even .7 can realistically be expected because of the diversity of

the construct being measured" (p. 709); and in the early stages of research a value of .5 may suffice (p. 709).

One technique suggested by Field (2013), and used in this study, was that test developers use factor analysis to validate a questionnaire and check the reliability of the scale. The reliability of the measure means that the questionnaire consistently reflects the construct that is being measured (p. 706). Based on a review of the literature I proposed that the two instruments used in this study, the Professional Quality of Life (ProQOL) Version 5 and the Exercise of Self-Care Agency scales were tested, valid instruments.

The ProQOL Scale Version 5

This study used the ProQOL Scale to measure the dependent variable of compassion satisfaction. Permission to use the scale in this study was given by the author (see Appendix D). The ProQOL Scale Version 5 instrument has three discrete scales (Stamm, 2010, p. 4) and all three were used in this study. However this study focused primarily on the instrument's compassion satisfaction scale in Part 2 of the study. Responses were measured on a 1-5 Likert-type scale where 1 was 'never' and 5 was 'very often'. The results of the inquiry of this study also yielded information on compassion fatigue/secondary traumatic stress and burnout. However, these additional scores were not the primary focus of this study. The aim of this study was to focus on achieving, maintaining, and improving compassion satisfaction through the lens of the compassion satisfaction scale of the ProQOL.

Stamm (2010) reported that previous versions of the ProQOL Scale had difficulty separating burnout and secondary/vicarious trauma, and as a consequence, a shortened

version was developed. This shorten version of 30 items "reduces the participant's burden of answering a larger number of items on the questionnaire" (p. 4). Stamm (2010) reported

> That this scale is based on over 1000 participants from multiple studies where the strongest and most salient items were retained… [with] 3 new items designed to strengthen the overall theory of the subscale (p. 4). These new items incorporated into these scales were developed based on the most current literature on burnout and theory relating to compassion satisfaction …where initial data suggested that the subscales have excellent internal consistency. (p. 4)

The ProQOL Scale has been used across many different types of professions (Stamm, 2010, p. 6). The reliability has been reported for the each scale: compassion satisfaction (.87); burnout (.72); and compassion fatigue (.80) (Stamm, 2010, p. 8). It was proposed that, with the reduction in items on the questionnaire, the "item-to-scale statistics have improved due to increased specificity and reduced collinearity" (Stamm, 2010, p. 8). It was also reported that "early returns on test re-test data suggest good reliability across time with a small standard error of the estimate" (p. 8). Stamm (2010) reported that on the revised scale

- The average score for compassion satisfaction is 37 (SD 7; alpha reliability .87). About 25% of the participants tended to score higher than 42 and about 25% tended to score below 33.

- It was reported that on the revised scale the average score for the burnout scale is 22 (SD 6.0; alpha reliability = .72). About 25% of participants score above 27 and about 25% score below 18.

- And, on the revised scale for compassion fatigue/secondary trauma and related vicarious trauma, the average score on this scale is 13 (SD 6; alpha reliability = .80). About 25% of the participants score below 8 and about 25% of participants score above 17. (Stamm, 2010, p. 8)

In this study, compassion satisfaction was defined as personal satisfaction felt by the individual in doing their job (Stamm, 2009).

The Exercise of Self-Care Agency Scale

The independent or predictor variable in this study, self-care agency, was examined by the Exercise of Self-Care Agency Scale developed by Kearney and Fleischer (1979). There were four subconstructs or factors of the Exercise of Self-Care Agency Scale that were factored and examined in this study that pertained to the social worker's ability to engage in self-care activities: (a) the social worker's motivation, (b) an active versus a passive response to situations; (c) the knowledge base of the social worker; and (d) the social worker's sense of self-worth (Kearney & Fleischer, 1979, pp. 26-27; Riesch & Hauch, 1988, p. 245). An examination of the Exercise of Self-Care Agency Scale revealed that the scale contains 43 items that measures on a 5 point Likert-type scale ranging from 0- 4 point: (where 0 = very uncharacteristic; 1 = somewhat characteristic; 2 = no opinion; 3 = somewhat characteristic; and 4 = very characteristic of

me). In this scale, total scores can vary from 0 to 172, where a higher score tends to indicate higher perceived self-care agency (Riesch & Hauch, 1988).

Field recommended that if a questionnaire has subscales, alpha should be applied separately to these subscales (p. 709). An observation of the internal consistency and test-retest correlations produced four factors: motivation ($\sigma = 0.92$); a passive response to situations ($\sigma = 0.86$); knowledge base ($\sigma = 0.8$); and self-worth ($\sigma = 0.91$) (Wong, Ip, & Shiu, 2012). In the Wong, Ip, and Shiu (2012) study, these four factors accounted for 48% of the variance. Riesch and Hauch (1988) also reported that the four divisions or subconstructs of the Exercise of Self-Care Agency Scale included, (a) the individual's motivation; (b) an active versus a passive response to situations (c) the knowledge base of the individual; and (d) the individuals' sense of self-worth. What was also important to this study was that alpha was applied separately to these subscales (Field, 2013, p. 709) or dimension, and each of these subscales, factors, or dimensions was treated as predictor variables.

Finally, instrumentation was controlled in this study because the many of the outcomes that I was observing for were achieved by using the responses of participants to two fixed instruments (Campbell & Stanley, 1963, p. 14), the ProQOL and the Exercise of Self-Care Agency scales, where I used the same instruments for both the pretest and posttest measures. The caution that I observed was that changing the instruments between pretest and posttest would negatively impact the scores outcome (p. 164) in this design. Additionally, using the same measuring instruments was a requisite of this design - a continuous measure.

Mortality

The suggestions of Creswell (2009) relayed that I may have participants who drop out during the study because of many reasons and I would be left with outcomes that are unknown for these participants. To control for mortality, one suggestion was "to recruit a large number of participants to account for dropouts or compare those who dropout with those who continue in terms of outcome" (p. 163). And, I proposed that providing the information module to all participants of the study, whether in the control group or the experimental group, would control for some of the mortality that could potentially occur in this study.

The Moderation Regression Design

In this study I began with a simple regression analysis suggesting that there was a linear relationship between self-care agency and compassion satisfaction. The variable of the exercise of self-care agency Scale had four dimensions: a) the social worker's motivation, b) an active versus a passive response to situations, c) the knowledge base of the social worker and, d) the social worker's sense of self-worth, which introduced multiple regression into the analysis. Next, I also examined self-care actions as a moderator between self-care agency and compassion satisfaction which introduced a moderation regression design. The main variables under examination, the independent variables and the dependent variable, were considered continuous variables and were analyzed as such; and, the moderating variable was dichotomous. I first looked at a two-way interaction and then a three-way interaction, seeking to make a case for each. I hypothesized that the impact of self-care agency would be greater as self-care actions

were introduced. The main predictor was Exercise of Self-Care Agency, and by partialing out each division of Exercise of Self-Care Agency individually as a focal predictor, I had an interactive model with four quantitative/continuous predictors of self-care agency, and a moderating variable of self-care actions considered a dichotomous predictor.

I realized that a weakness in the moderation regression design is low power. The power values for this test of moderation regression were very low. Kenny (2015d) explained that although I chose a priori of .15 for a medium effect size, a more realistic effect size for moderation regression analysis is much lower where some literature puts the common effect size at 0.009. However, in this moderation regression design I was not expecting large effect sizes. What I wanted to show was that a change in effect had occurred, realizing that these values tend to be very low. For future studies, a researcher may want to increase the power to .95 to have a more acceptable effect size (Jaccard, 2001, p. 42); however, I believed that this was the appropriate design for this study as explained in Chapter 3.

Theoretical framework. The original premise this study was that self-care actions was believed to moderate/mediate the compassion stress experienced by the social worker and enhance the outcome of compassion satisfaction (Figley, 2002; Radey & Figley 2007). But, the question arose as to how I would measure the compassion stress experienced by the social worker. I realized that focusing on construct of compassion stress tended to lead away from the aim of drawing attention to positive elements that lead to the social worker flourishing in the profession. Therefore, I decided to focus on self-care and its ability to enhance the outcome of compassion satisfaction.

Next, I pursued a conceptual framework for the independent variable of self-care with the intentions of building a theory that would align with, and further develop, the research questions. However, after reading the literature surrounding the self-care/self-care deficit model of Orem, I proposed that the theories in this model were applicable to the compassion satisfaction/compassion fatigue model proposed by Stamm. Therefore, theories of both of these models framed the research questions, and were used as the theoretical framework. I also considered several designs for this study.

Cherry (2000) suggested that a weakness in a within-subject design, also called a single-subject design, single-case design, or intra-subject design (Cooper et al., 2007, p. 163), was that when it is used with an individual, "it cannot be generalized because one individual under study does not make a whole" (Cherry, 2000, p. 104), making it a univariate analysis (Cherry, 2000, p. 104). I considered a single-subject design for this study using between four and eight participants, which is about the average number of participant used in this type of design (Cooper et al., 2007, p. 163). However, if I used a within-subject design with a small number of participants, there would be an issue with the power analysis, and the limited number of participants. I decided to use G*Power to be informed of the minimum amount of participants needed to achieve and power level on 0.80.

Building on this design theory, it was suggested that the term single-subject design can also be a misnomer (Cooper et al., 2007) in research. When studying further I found that Cooper et al. (2007) proposed that when referring the term single-subject design, it is not because a study is necessarily conducted with one subject, but because

the experimental logic or reasoning for analyzing behavior changes often employs the

subject as his or her own control (p. 163). In other words, "repeated measures of each

[participant's] behavior are obtained as he or she is exposed to the condition of the study

(e.g., the presence or absence of the independent variable)" (Cooper et al., 2007, p. 163).

However, in a moderation regression design, a bootstrapping technique incorporated in

SPSS can also generate repeated measure for analysis centered on the mean distribution

which seemed more appropriate for this study.

When comparing variations in design, it was observed that the within-subject

design, the regression discontinuity design, and the moderation regression design shared

characteristics. First, both the regression discontinuity and moderation regression center

on linear regression. I observed that a within-subject design would assist me in studying

changes that occur in one social worker, or one group of social workers (Cherry, 2000, p.

99). But, interestingly, a within-subject design would also measure a single individual or

single group over time using repeated measures of the same target measure or

characteristic (Cherry, 2000, p. 99), which was the target strategy in this study.

All three strategies would allow me to use the professional social worker roster in

a single group and with-in group design. And from this lens, the moderation regression

design used the A-B strategy of the within-subject design. Although the A-B strategy is

considered a weak baseline design when using one individual, it still provided an

objective measure of change or lack of change in the dependent variable (Cherry, 2000,

p. 105) in this study. The moderation regression design gave me an opportunity to look at

the interaction effect by comparing the data between analysis techniques.

The final choice was the moderation regression design. Patton (2002) proposed

that "in research, as in art, there is no single, ideal standard…That…research …is the art

of the possible" (p. 12). The goal the moderation regression design was to use and report

the results through the use of the PROCESS add in. However, with the small sample size,

I assessed the total effect of the variables in a three-way contingency or relationship with

a general linear model, univariate, pairwise examination of the posttests of compassion

satisfaction using an F test. I was able to examine the effect of the informational module

on the posttest variables of compassion satisfaction using an alternate design and then

compare my reported results with the design using PROCESS.

A group of 46 licensed professional social workers were invited to participate in

the study using a pretest – posttest control group design. The structure of the study

allowed for a pretest, and informational module of study, a wait-period, and a posttest. It

was proposed that this design allowed me to take a naturalistic approach to this study by

allowing the informational module to unfold in the natural environment where data was

gathered using a time span of at least six weeks. These measures helped address a

possible reactive arrangement and external validity. This design also allowed me to

perform moderation regression analyses on all of the divisions of the independent

variable and their relationship to all the subconstructs of the dependent variable,

acknowledging that these dependent variables were measured on discrete scales.

However, the focus was on the subconstruct of compassion satisfaction and its scale.

The parameters of participant selection were met by inviting participation from a

professional social workers' roster. The online course supplied all of the instruments

needed for the participant to utilize the four-session module. The informational module used a combination of a didactic and experiential learning. It was necessary for each participant to download the manual in preparation for this informational module, and it was necessary for participants to complete all training materials on-line, read through manuals, complete quizzes and all of the recommended materials. Once all the requirements were met, they received a certificate of completion (Traumatology Institute, 2012). This module would also assist the professional social worker who was, had been, or may become compassion fatigued due to their caring work.

Limitations

Design Limitations

A limitation of the moderation regression design is related to power and effect size (Kenny, 2015b). The acceptable power value used by me was 80 or 80% at an alpha level is .05 and an effect size of 0.15, considered a medium effect size (G*Power 3.1 Manual, 2014). The rationale for this measure was that this was an a priori entry, and therefore the effect size was set at medium and the minimum sample size was to be 92 participants to help answer the research questions with the specified level of confidence of 0.95. In the moderation regression design, I expected that at a power level of 0.80 the effect size will be extremely low, which was typical of this design (Kenny, 2015b). And, if I wanted to increase the power to 0.95, more participants would be needed for the study to achieve a larger effects size in the data. Therefore, the power values for this test using moderation regression were expected to be very low and may cause a concern with the statistical validity of Part 2 of the study.

Biases that Could Influence Study Outcomes

I am a certified compassion fatigue therapist, an educator, and a certified clinical trauma therapist who has participated in the proposed informational module. As an LPC-Associate I have been exposed to the trauma of clients. However, the data collection in the study and the informational module was done online and independent of me. I analyzed the regression and moderation regression data as imported data with the use of the SPSS software program.

Concept analysis. A limitation of this study involved concept analysis where there was difficulty in synthesizing and building on previous evidence-based research and findings due to variations and use of terminology of the major constructs of compassion and self-care. Consequentially, there was difficulty in synthesizing and building evidence-based theory pertaining to the terms. It was found that the later literature tended to reconfigure terminology based on the knowledge gained through mounting literature on the subject. This later research with updates and explanation of terminology was monumental in the role of synthesizing previous literature. Godfrey (2010) proposed the limitation that defining self-care depended on the perspective of the professional (p. 167), where different professionals tended to view self-care within their own domain of practice (p. 3). Here, research on the concept of self-care and the social worker and other professionals was very limited.

A Shift in Conceptual Framework

Another limitation of this study was in making a proposed conceptual framework shift (see Harr & Moore, 2011, p. 351; Radey & Figley, 2007; Stamm, 2010) posited by

some researchers where research should spotlights the positive elements that lead to the social worker flourishing in the profession. Although there were numerous articles on compassion fatigue, compassion satisfaction has not yet built up the same volume of literature. One way that I chose to build up a volume of literature was to incorporate literature pertaining to affect and empathy into the theory of compassion. This action was based on a review of the literature that included the proposal that empathy is a multidimensional processual construct (Thomas, 2013, p. 366), and that empathy is a component of compassion; that compassion fatigue is based on assumptions of empathy and emotional energy (Figley, 2002, p. 1436); that affect encompasses both specific emotions and more diffused moods (Miner et al., 2005, p. 171); and that affective work behaviors are explained by employee mood and emotion (Yi-Chang, Yu, & Chin-Cheh, 2014, p. 1537).

Significance

Potential areas of significance include when the social worker experiences compassion satisfaction, this individual may also experience mental, physical, and spiritual well-being (Harr & Moore, 2011). The promotion of compassion satisfaction through self-care can cause the transformation of a negative effect to positive (Stamm, 2010), where the social worker has the ability to flourish on the job and experience and mental, physical, and spiritual well-being (Harr & Moore, 2011). This study may create an understanding of the interaction of the variable of self-care and its effect on the variance on a continuum of compassion may limit premature attrition from the profession (see Bride, 2007; Fahy, 2007). I suggested that a practical informational module could

inform the individual social worker and the social work profession by increasing the knowledge in theory and providing a study of a practical application of a variable that may promote positive outcomes associated with the practice of compassion (Slicum-Gori et al., 2011). Conversely, the interaction between the social worker and the traumatized client may lead to a range of disturbances in the social worker including those related to affect, cognition, and self-regulatory functioning (Thomas, 2013). This phenomenon as a whole can be perceived to be an occupational hazard (Bride et al., 2007).

I believed that in addition to increasing the social worker's positive affect (Baranowsky et al., 2002; Fredrickson & Losada, 2003; Radey & Figley, 2007), an improved understanding of the interaction of the variables of self-care, compassion satisfaction, and compassion fatigue would lead to better social worker retention on the job, where previous findings supported the contention that compassion fatigue may be a reason why many human services professionals, including the social worker, may leave this job prematurely (Bride, 2007; Fahy, 2007). Poor self-care was proposed to be a contributor to compassion fatigue (Radey & Figley, 2007), and it was proposed that self-care was being overlook by the social worker (p. 212); self-care was a strategy (Baranowsky & Gentry, 2002; 2010) that could counter the effects of compassion fatigue, which could be a consequence to a social worker who is working with traumatized clients; and the corrosive effects of compassion fatigue could be reversed through self-care agency, transforming negative affect to positive, promoting compassion satisfaction and the social worker's ability to flourish and remain on the job. Therefore, the contributions of this study included assistance in the area of premature attrition of the

social worker participant, promoting flourishing on the job through well-being; reducing and addressing what is perceived as an occupational hazard; and providing the social worker participant with the additional support, which was cited in the literature another gap.

Summary

The psychology of compassion and the self-care/self-care deficit model were the theoretical foundation framing this study. Compassion was considered a necessity in effective direct social work practice, and a review of the literature suggested that in order to have a holistic understanding the construct, one must look at the interaction of both compassion satisfaction and compassion fatigue through a psychology of compassion in professionals like the social worker. Stamm (2002) suggested that it is not possible to fully understand the negative aspects of compassion fatigue without knowledge about the positive in terms of compassion and positive affect. To maximize compassion satisfaction in the social worker, there needed to be education, research, and training that promoted success for professionals like the social worker.

As the social worker empathizes with the client through sustained compassion, there could be the onset of compassion stress which could lead to compassion fatigue. However, the social worker's goal is not to avoid this compassion stress that comes from the job environment, but to be able to seek fulfillment through this work (Radey& Figley, 2007). It was proposed that the compassion satisfaction model would be influenced by affect, positivity-negativity ratio, and self-care where these attributes would equip the social worker with an adaptive bias to approach and explore novel situations, where

optimal mental health tends to be associated with high ratios of positive to negative affect (Fredrickson & Losada, 2003).

It is proposed that self-care actions would moderate compassion stress and compassion fatigue (Figley, 2002; Radey & Figley, 2007). Self-Care has the potential to lead to an improved professional quality of life for the social worker; and the corrosive effects of compassion fatigue would be reversed through standards of care and self-care management (Bride, 2007) where one would observe a transformation of negative affect to positive (Stamm, 2010) promoting success (Stamm, 2002) and compassion satisfaction. It was proposed that if self-care was not an ongoing process for the social worker, that when this individual became aware of the risks associated with compassion fatigue related to self, this worker could begin to implement self-help and self-care skills (Bride & Figley, 2007). I investigated the infusion of self-care education about the psychology of compassion and self-care as a recursive process (see Figley, 1998) for the social worker and social worker trainees where this training would act as a conduit for positive affect for the social worker already practicing in the field.

This study was data driven using a moderation regression design. Self-Care agency functioned as an independent variable. Through the use a pretest – posttest, control group, comparison strategy participants were assigned to the informational module or comparison group solely based on randomization. The 46 participants from a roster of professional social workers assisted in exploring the proposal that the behavior of self-care agency affected the variance on the discrete compassion satisfaction on the scale, where self-care actions functioned as a moderating variable. The dependent

variable of compassion satisfaction was operationalized using the ProQOL Version 5 Scale (Stamm, 2009); the independent variable of self-care agency was operationalized using the Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979); and the informational module was guided by the theories of motivation operations proposed by Michael (2007).

In Chapter 2 I shared reviewed literature on the constructs of compassion and self-care agency and built a foundation for the proposed informational module. In Chapter 3 I discussed the moderation regression design and other analytical methods that were used in this study; In Chapter 4 I answered the research questions, described the time frame of data collection, discussed recruitment and response rates, the demographics, external validity, and reported the results of the study. In Chapter 5 I interpreted of the findings, discussed why this study was conducted and the possible benefits of the findings.

Chapter 2: Literature Review

The public receives many valuable services through the social work profession, and a review of the literature showed that many individuals in society may need the assistance of the social worker. The profession of social worker is multifaceted, encompassing many public needs. It was suggested that the job of social work requires the social worker to establish rapport, and to show empathy and compassion to the client as part of the job where compassion is considered a necessity in the social work profession and is referred to as a building block for effectiveness in social work (Radey & Figley, 2007, p. 207). However, there are hidden dangers in this profession: the social worker may begin to suffer fatigue from continuously helping individuals in crisis and trauma.

One kind of fatigue that is experienced by the social worker is known as compassion fatigue. Compassion fatigue (Baranowsky & Gentry, 2010; Bride, 2007; Bride & Figley, 2007; Cunningham, 2004; Fahy, 2007; Kapoulitsas & Corcoran, 2015; Najjar, Davis, Beck-Coon, & Doebbeling, 2009; Stamm, 2010), is considered a combination of secondary traumatic stress, and burnout (Baranowsky & Gentry, 2010; Stamm, 2010), where burnout tends to be associated with the workload of the social worker. Lambert, Barton-Bellessa, and Hogan (2015) suggested that job burnout tends to be associated with higher levels of turnover or a desire to leave the job. Burnout can emerge after extreme cases of either vicarious traumatization or compassion fatigue (Sansbury et al., 2015, p. 115). Yet, the literature also suggested that self-care can positively affect the individual leading to compassion satisfaction and Yonder (2010)

suggested that compassion satisfaction can have a positive effect on burnout and compassion fatigue. Gentry (2002) suggested that compassion fatigue can also act as "a catalyst for positive change, transformation, resiliency, and maturation in the lives of the caregiver" (p. 37). While it is proposed that compassion satisfaction can have a positive effect on secondary traumatic stress and burnout, it is also proposed that secondary traumatic stress and burnout can also motivate the professional social worker to take action which can lead to compassion satisfaction in the work environment.

A rationale of this study is that self-care agency is believed to have an effect on compassion stress and compassion fatigue (see Figley, 2002; Radey & Figley 2007). However, the benefits of the exercise of self-care agency and the professional has received sparse attention in scholarly empirical literature and research (Radey & Figley, 2007, p. 210) creating a gap in the field. Salloum et al. (2015) suggested that few studies had centered on the benefits of self-care empirically (p. 54). Additionally, this lack of research on the benefits of self-care also extends to the social work profession, even though self-care is considered an "ethical imperative" (Goncher et al., 2013, p. 54), and is considered a core foundational and functional competency in professional practice (p. 54), including the practice of social work.

I aimed to address this gap by providing empirical data regarding the relationship between the constructs of self-care agency and compassion satisfaction. It is believed that the need for the study is supported by the work of Yonder (2010) who suggested that compassion satisfaction can have a positive effect on burnout and compassion fatigue, but that more research is needed to support this premise (p. 195). An argument proposed

was that unchecked compassion stress leading to compassion fatigue may be related to the premature attrition seen in the social work profession (Bride, 2007; Fahy, 2007). It is also proposed that compassion fatigue is a "natural, predictable, treatable, and preventable" (Jacobson et al., 2013, p. 457) phenomenon and the corrosive effects of compassion fatigue can be reversed through self-care agency, transforming negative affect to positive (Stamm, 2010). It was proposed that (a) promoting compassion satisfaction can enhance the social worker's ability to flourish; (b) compassion satisfaction can promote positive social change for the individual, the organization; (c) with compassion satisfaction, there may be the realization of improved social worker mental health (Fredrickson & Losada, 2003; Harr & Moore, 2011); and (d) with compassion satisfaction there may be an understanding leading to improved social worker retention on the job (Bride, 2007; Fahy, 2007).

In this chapter I reintroduced the problem and purpose of the study. There are results from a detailed search of the literature pertaining to the key variables in this study, a discussion of the theories used to develop the theoretical foundations along with information on their origins and sources, an extensive review of literature related to the key variables under study, a summary of the major themes, and a conclusion addressing how the present study will fill the gap in literature.

Literature Search Strategy

To illuminate the construct of compassion, its subconstructs, and self-care agency, I conducted a search through the Academic Search Complete Database. This database is a comprehensive scholarly, multi-disciplinary, full-text database containing more than

7,300 peer-reviewed journals with literature as early as 1887 and searchable cited references from 1,400 journals (EBSCO Publishing). A search of this database provided literature pertaining to the following key words: self-care agency, compassion, positive affect, compassion satisfaction, compassion fatigue, compassion stress, burnout, vicarious trauma, empathy, and social worker.

The SAGE Journals were also used to access current literature with dates spanning 2011 to 2015. However, because there has been sparse literature on the self-care agency as it pertains to the social worker and other professionals, all dates were considered relevant for incorporation of the literature review to build a basic foundation. A search of the literature using the key words social worker and secondary traumatic stress showed 13 articles between the dates of 2011 and 2015 that were considered relevant to this study, and a search of the literature using the key words social worker and compassion fatigue also showed 13 articles between the dates of 2011 and 2015 that were considered relevant.

Literature pertaining to the compassion satisfaction variable search results was limited. Compassion satisfaction was identified within studies, but only a few identified compassion satisfaction as a separate construct under study. A combination of compassion satisfaction and the social worker returned 16 articles where compassion satisfaction was combined with other subconstructs related to compassion. When using the limiters and focusing on just compassion satisfaction and the social worker there were no articles returned for viewing. A search of the database with the limiter of just compassion satisfaction returned fewer than 10 articles for viewing. A search of self-care

agency returned 79 articles which were related to a current study. To assist in understanding the construct of compassion, I incorporated literature on empathy and positive affect which will also be discussed in this chapter.

Theoretical Foundations

This study centered on theories related to compassion (Stamm, 2010; 2016), with a focus on the compassion satisfaction/compassion fatigue theories (Stamm, 2010), the self-care/self-care deficit model (Orem, 1985), and performance theories of motivating operations based on the work of Michael (2007) observed through the lens of applied behavior analysis and learning. These theories, discussed in this chapter, were chosen because they provided a theoretical foundation for this study, where I had selected propositions derived from these theories to structure an empirical investigation (see Frankfort-Nachmias & Nachmias, 2009).

This study also focused on compassion satisfaction and the professional social worker. A rationale for the choice of the compassion satisfaction theory came from literature that tended to continue to support the contention that a sense of satisfaction may also be a prime motivator for continued service in the field of social work (Harr & Moore, 2011). It was proposed that when an individual enters the social work profession, there may be an anticipated sense of satisfaction that can be derived from the job of helping others (Harr & Moore, 2011). This sense of satisfaction may generate positive feelings that will sustain and nourish the individual that has chosen a helping profession. With compassion satisfaction, Stamm (2010) relayed that there can be a pleasure gained in doing the job well; Harr and Moore (2011) proposed that compassion satisfaction

contributes to the mental, physical, and spiritual well-being of the helping professional and may mitigate the negative effects of burnout and compassion fatigue.

However, to examine the RQ2 I had to build upon the existing theory of compassion because of sparse literature on just the subject of compassion satisfaction. Therefore, to assist in building on the foundation within the concept of compassion satisfaction, I incorporated literature on the related theories of positive affect (see Çivitci, 2015; Fredrickson &Losada, 2003; Isik & Üzbe, 2015) and empathy (see Radey & Figley, 2007, p. 207; Thomas, 2013, p. 365). I proposed that these two concepts, positive effect and empathy, are directly related to compassion as supported by the literature review.

More recent literature on constructs related to compassion has highlighted postive affect in relation to the work environment of the professional in the helping profession. This built upon the existing concept of compassion satisfaction. According to Çivitci (2015), positive affect also tends to reflect the degree to which the social worker "feels energetic, enthusiastic, cheerful, active and alive" (p. 567). Isik and Üzbe (2015) suggested that the concept of positive affect denotes the combination of joviality, mental alertness, willingness, and determination (p. 588), which tends to reflect Fredrickson and Losada's (2003) idea that positive affect can predict resiliency and facilitate behavioral flexibility and the individual may experience enhanced coping strategies allowing the social worker to draw upon personal resources during incidents of stress. The literature review contributed to the contentions that engaging in self-care could improve the social worker's wellbeing, functioning, and quality of life (see Godfrey, 2010, p. 159), where

positivity can be addressed with the development of compassion satisfaction through self-care (Harr & Moore, 2011) and self-care agency. Yonder (2010) proposed that compassion satisfaction can have a positive effect on burnout and compassion fatigue-two negative aspects of compassion - but that more research was needed to support this premise (p. 195).

Support for the incorporation empathy into the concept of compassion satisfaction came from Thomas (2013) who proposed that empathy is necessary in successful social work practice, and a review of the literature suggested that empathy is a component of compassion (Radey & Figley, 2007, p. 207). In this study, empathy was used in the description of compassion, proposing that there is "empathetic engagement" (Bride et al., 2007, p. 155) involving the social worker and a client who is traumatized. Thomas proposed that empathy requires the social worker to establish a rapport with the client who is traumatized (p. 365), while Stamm (2002) proposed that there tends to be a "deep empathy" (p. 107), along with a feelings of sorrow for sufferings of others, when examining the theory of compassion. Theories of positive affect were also used to discuss the positive aspects of the professional social worker in connection with resilience and behavioral flexibility (Fredrickson & Losada, 2003) and willingness and determination (Isik & Üzbe, 2015) leading to an increased sense of satisfaction (Godfrey, 2010).

The theoretical foundation of the dependent variable, or criterion variable, of compassion satisfaction came from Figley and Stamm. A review of the literature showed that it was Figley who first introduced the model of compassion fatigue in 1995 (Figley, 2002), publishing his first book on compassion fatigue in 1995. However, Coetzee and

Klopper (2010) credited Joinson as the first to introduce compassion fatigue while investigating the nature of burnout in nursing (p. 235). Additionally, it is reported that Joinson never formally defined the concept (p. 235). It was suggested by Coetzee and Klopper that the concept was adopted by Figley as a more "user friendly term for secondary traumatic stress" (p. 235); and, it is suggested that the current use of these terms has drifted from Joiner's orignial ideas of compassion fatigue (p. 235).

The theory of compassion fatigue was defined by Figley as a state of tension and preoccupation with the traumatized patients by re-experiencing the traumatic events, avoidance/numbing of reminders, and persistent arousal (e. g. anxiety) associated with the patient. It is a function of bearing witness to the suffering of others (p. 1435). Figley's (2002) theories of compassion fatigue included the proposal that empathy and emotional energy are the driving force in working with the suffering in general by establishing and maintaining an effectively therapeutic alliance, and delivering effective services including an empathetic response (p. 1436).

Stamm helped the focus of this study to evolve. The original theory of the compassion fatigue model proposed by Figley evolved into the compassion satisfaction /compassion fatigue model (Stamm, 2016) focusing on the conjecture that (a) one cannot fully understand compassion fatigue without also understanding compassion satisfaction because some social workers are doing well (Stamm, 2002, p. 110); (b) in order to holistically understand compassion in professionals like the social worker, one must also look at the interaction of both compassion satisfaction and compassion fatigue; and (c) that it is not possible to understand the negative aspects of compassion fatigue without

knowledge about the positive in terms of compassion satisfaction and positive affect. I observed that the theories associated with compassion satisfaction/compassion fatigue are incorporated into the ProQOL Version 5 Scale (Stamm, 2009). I also realized that this was a data informed theoretical model (Stamm. 2010). Therefore this instrument, and the theories of compassion incorporated into this instrument, were used to measure the dependent variable in this study.

Bride et al. (2007) suggested that the ProQOL Scale is a revision of Figley's (1995) compassion fatigue self test which was composed of three discrete subscales (p. 159). The ProQOL Scale Version 5 is an instrument that also has three discrete scales: compassion satisfaction, secondary traumatic stress, and burnout (Stamm, 2010, p. 4). And, although Stamm (2010) proposed that ProQOL Scale incorporates both the positive aspects of compassion satisfaction and the negative aspects of compassion fatigue, I incorporated all three components, but I focused specifically on the instrument's compassion satisfaction scale.

As shown in Figure 1, Stamm (2010) also proposed that compassion fatigue can be further broken down into burnout and secondary traumatic stress. The effects include exhaustion, frustration, anger, and depression which are typical of burnout and secondary traumatic stress, which are negative feelings driven by fear and work-related trauma (p. 8). Stamm's theory proposed that secondary traumatic stress is about work-related, secondary exposure to people who have experienced extremely or traumatically stressful events (p. 13). The premise here was that secondary traumatic stress is an element of compassion fatigue (p. 13). Conversely, compassion satisfaction encompasses the

positive aspects of helping others (p. 10). Stamm (2010) reported that previous versions

of the ProQOL Scale had difficulty separating burnout and secondary/vicarious trauma,

and as a consequence, a shortened version of the scale was developed.
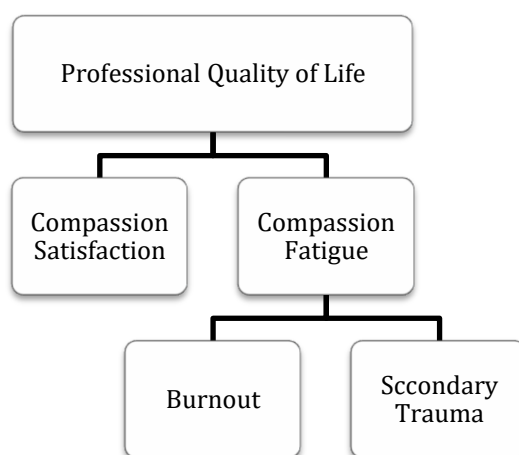
Figure 1. From "Diagram of the Professional Quality of Life" by B. Stamm, 2010, in
Concise ProQOL Manual 2nd Ed., p. 8. Reprinted with permission (see Appendix E).

Version 5 of the ProQOL Scale is "based on over 1000 participants from multiple studies

where the strongest and most salient items were retained" (Stamm, 2010, p. 4). And in

this version, three new items were added "to strengthen the overall theory of the

subscale" (p. 4). It was reported that these scales "were developed based on the most

current literature on burnout and theory relating to compassion satisfaction, where initial

data suggested that the subscales have excellent internal consistency" (p. 4).

Thomas (2013) helped support the theoretical foundation of this study surrounding empathy as a related construct to compassion. It was theorized that (a) empathy is important for the social worker if this worker is to become an effective client helper; (b) that empathetic interaction between the social worker and the client is complicated; (c) and that the complicated interaction may affect the social worker in terms of their affective, cognitive, and self-regulatory competence (p. 365). However, Thomas (2013) also reported that there has been sparse literature examining the effects of empathy on the professional quality of life (p. 371). In a related study, Thomas (2013) examined the relationship between personal distress and empathy with 171 licensed social worker participants using data collected in earlier research in 2008. In this study I used the ProQOL Scale 5th Edition to measure the constructs under study. Also using the ProQOL Scale as one of the two instruments in the study, Thomas (2013) found that "higher distress is associated with higher compassion fatigue, burnout, and lower compassion satisfaction among clinical social workers" (p. 375). In contrast to the variables in Thomas' (2013) study, this study used the ProQOL Scale Version 5 to examine the relationship between self-care agency and compassion satisfaction.

Other studies have also used the ProQOL Scale to examine similar constructs (Harr & Moore, 2011; Jacobson, 2012; Khan, Khan, & Malik 2015; Ray, Wong, White, & Heaslip, 2013; Slicum-Gori et al., 2011; Smart et al., 2014; (Sprang, Clark, & Whitt-Woosley, 2007; (Sprang, Craig, & Clark, 2011). Additionally, the Harr and Moore (2011) study used the ProQOL Scale in a pilot study with the social worker population and the variable of compassion fatigue. This study was believed to be similar since it

incorporated an informational module, the social worker population, and a component of compassion.

In this study, *The Impact of Self-Care Agency and Compassion Satisfaction on the Professional Social Worker*, I built on the theories of Figley (2002) and Stamm (2002) and examined them in to relation to self-care agency, a component of the self-care deficit model, as explained by Orem (1985). I applied Orem's self-care deficit nursing model to the construct of compassion. During scholarly dialogue with Fawcett (2001), Orem referred to the science of self-care, and to the science of the development and the exercise of self-care agency. These two foundational nursing sciences (Fawcett, 2001, p. 35) drove the theoretical foundation of this study where the independent variable was self-care agency, "a component of the self-care deficit nursing theory developed by Orem (1980)" (Sousa, 2002, p. 1).

Foremost, my rationale for the use of the variable of self-care agency came from the work of Sousa (2002) who relayed

> That there have only been a few studies that have examined the relationship between self-care agency and outcome… [where] self-care actions are mediators between self-care agency and goal-oriented outcomes, [suggesting] that if someone exercises self-care agency, he or she performs self-care actions which would lead to the achievement of a desired outcome". (p. 3)

And, for this study, the desired outcome was compassion satisfaction and its relationship to self-care agency. I found that the theory framing the moderating variable of self-care actions suggested that if the social worker participant exercised of self-care agency, he or

she performed self-care actions, which could lead to the achievement of the goal-oriented outcome (Sousa. 2002, p. 3) of compassion satisfaction.

I theorized that self-care actions, which were the behaviors in this study, consist of learned behaviors that "regulate one's integrity, functioning, and development" (McBride, 1987, p. 6). In interpreting McBride's (2002) review of Orem's (1985) self-care deficit model, it was theorized that self-care is "the practice of activities that the individual initiates on their own behalf to maintain life and health" (p. 311). And to do so, McBride (2002) theorized that "one must have the necessary knowledge, skill, and motivation: that is, self-agency" (p. 2); and, "an inability to meet the demand constitutes a self-care deficit" (McBride, 1987, p. 311). Therefore, proposed that learning and use of trauma related skills could positively affect compassion satisfaction in the workplace.

Gatlin (2014) defined self-care as the ability to engage in self-care, where certain factors can condition or affect an individual's ability to engage in self-care (p. 5) which could include a lack of /or addition of knowledge or training. In this study I sought to examine the impact of knowledge and training on the social worker professional. Sousa (2002) proposed that there are ten basic conditioning factors that influence self-care agency: two of which are personal and environmental factors (p. 2). And, of particular interest to this study were theories surrounding the personal conditioning factors and environmental resources (p. 2). Sȯderhamn (2000) theorized that "individuals who can produce effective self-care have knowledge about their environment and themselves" (p. 184). I suggested that these theories strengthened the rationale for the use of the informational module in this study.

I supported the theory that knowledge and an understanding of self-care agency, as it relates to compassion, can also advance the field of social work practice; and that the structure of Orem's theories lend themselves to expansion to other professional fields. And, applying Sousa's (2002) definition to the definition of self-care, self-care agency relates to the social worker's "ability to recognize his or her own needs, to evaluate personal and environmental resources, and to determine and perform [self-care] actions to achieve a desired goal" (p. 3). In this study, the main outcome variable was compassion satisfaction along with additional the outcome goals of secondary traumatic stress and burnout which were also examined.

The theories of Orem were incorporated into a measurement instrument which was used in this study. As the IV, or predictor variable in this study, the exercise of self-care agency measured by the Exercise of Self-Care Agency Scale which was based on the theories of Orem and developed by Kearney and Fleischer (1979) as shown in Figure 2.

Exercise of Self-Care Agency

COMPONENTS →

Active vs. Passive Motivation Knowledge Self-Worth

INDICANTS →

Responsibility for Self Motivation to Care for Self Apply Knowledge to Self-Care Health Priorities Self-Esteem
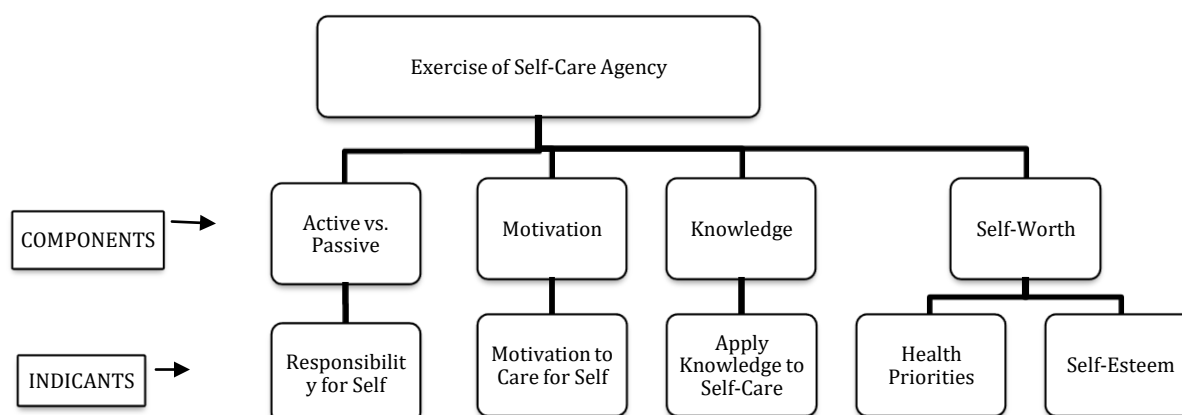
Figure 2. From "Diagram of components and indicants of the Exercise of Self-Care Agency" by B. Kearney and B. Fleischer, 1979, in Development of an instrument to measure the Exercise of Self-Care Agency, *Research in Nursing*, 2(1), pp. 25-34. Reprinted with permission (see Appendix F).

There are four subconstructs or factors of self-care agency which were examined that pertained to an social worker's ability to engage in self-care activities. They were (a) the social worker's motivation, (b) an active versus a passive response to situations; (c) the knowledge base of the social worker; and (d) the social worker's sense of self-worth (Kearney & Fleischer, 1979, pp. 26-27; Riesch & Hauch, 1988, p. 245). In the Wong et al. (2012) study these same four factors accounted for 48% of the variance. Riesch and Hauch (1988) also reported that there are four divisions or sub-constructs of the Exercise of Self-Care Agency Scale.

What I considered most important to this study was the parameter that if a questionnaire has subscales, alpha should be applied separately to these subscales (Field, 2013, p. 709). In this study each of these subscales or factors was treated as a separate

predictor variable; and compassion satisfaction was examined through the lens of the four

known components of self-care agency. Unfortunately, there was no recent literature that

used the exercise of self-care agency with the population sample in the study of

compassion satisfaction.

Through the literature reviewed it showed that self-care agency, a component of

the self-care/self care deficit model, was a variable that could effect change in the DV of

compassion satisfaction. Therefore, an informational module was incorporated into this

study which a focus on self-care actions, a component of self-care agency; and the

variable of self-care actions (M) was used as a moderator between self-care agency and

compassion satisfaction. By using the informational module, I posited that proving to the

social worker that the consequences were meaningful (Gilbert, 2007, p. 257) would

enhance participation in self-care agency activity. I reasoned that this could be provided

through an informational module where there was the infusion of self-care education and

compassion education for the social worker currently on the job (Bride & Figley, 2007). I

also posited that self-care agency could support compassion satisfaction, and the

knowledge and training could impact compassion satisfaction to the extent that one could

observe a significant variance of the DV of compassion satisfaction.

Theories pertaining to the informational module were examined through

moderation regression analyses which focused on "the development of compassion

satisfaction through self-care" (Harr & Moore, 2011, p. 351) actions. The module chosen

was *Tools for Trauma: A CBT Approach* (Baranowsky & Gentry, 2010). I suggested that

this informational module embodied principles of behavior analysis and the theories of

operant behavior that could direct learning. Theories proposed included the proposals that

(a) "operant behavior can be selected, shaped, and maintained by the consequences"

(Cooper et al., 2007, p. 31); and (b) operants are defined functionally, by their effect. I

suggested that major theories that guided the informational module were based on

theories of applied behavior analysis and include

- An assumption that self-care behavior is learned behavior (Godfrey, 2010, p. 28).

- Self-Care is a strategy (Baranowsky & Gentry, 2002; 2010) that can counter the effects of compassion fatigue, which can be a consequence to a social worker who is working with clients who are experiencing trauma; and the corrosive effects of compassion fatigue can be reversed through self-care, transforming negative affect to positive (Stamm, 2010); promoting compassion satisfaction enhances the social worker's ability to flourish and remain on the job.

- Self-Care is operant behavior; and operant behavior is modifiable by its consequences (Cooper et al., 2007; Godfrey, 2010). Additionally, the outcome of self-care can affect the variance on a continuum of compassion in the direction of compassion satisfaction, producing a change in measure on the compassion satisfaction variable.

- Through operant conditioning, one may notice that "positive consequences of engaging in self-care activities include the achievement of desired outcomes" (Godfrey, 2010, p. 159) like compassion satisfaction; one may also notice

"increased sense of satisfaction, increased sense of responsibility, control, independence, and autonomy" (p. 159).

- Operant conditioning could strengthen the operant where the response would be more probable and more frequent (Cooper et al., 2007, p. 34); that if operant conditioning had taken place, one would observe an increase in frequency: suggesting that reinforcement had taken place (p. 34).

- Self-Care actions, functioning as a third variable or moderator, could have a moderating affect on the outcomes of compassion satisfaction and compassion fatigue. The literature reviewed suggested that a moderator can involve "either manipulation or assessments and either situational or person variables" (Baron & Kenny, 1986, p. 1173); "a moderator is a qualitative or quantitative variable that affects the direction and/or strength of the relation between the independent, or predictor variable, and the dependent or criterion variable" (p. 1174).

- Introducing a moderating variable can change the direction or magnitude of the relationship between two variables through enhancing, buffering, or antagonistically (Elite Research, LLC, p. 1) where antagonistic means "increasing the moderator would reverse the effect of the predictor on the outcome" (p. 1).

- With the informational module, before the social worker performed the actions of self-care as a moderator, "one must first prove to the social worker that the consequences were meaningful" (Gilbert, 2007, p. 257).

More recent literature has suggested that there should be a conceptual framework shift which focuses on positive elements that lead the social worker towards flourishing in the profession (Harr & Moore, 2011, p. 351; Radey & Figley, 2007; Stamm, 2010). The proposed conceptual shift provided the rationale my choice of the compassion satisfaction/compassion fatigue model and its theories in this study. The rationale was to highlight a positive variable that was predicted to enhance compassion satisfaction in the social worker participant. The positive variable used in the study was the exercise of self-care agency. This relationship is discussed further with the DV.

A review of the literature suggested that there has been a history of a lack of conceptual clarity in the terms used to discuss compassion (Adams et al., 2006, p. 104; Harr & Moore, 2011, p. 351); consequentially, there may be difficulty in understanding and interpreting existing research (Elwood et al., 2011, p. 26); and Baird & Kracen (2006). It was suggested that there has also been difficulty synthesizing many research findings (Elwood et al., 2011) and building evidence-based theory (Baird & Kracen, 2006) pertaining to the terms used in the literature and research on the construct of compassion. Therefore, I incorporated into the literature review the most prominent terms used to address aspects of compassion and thus build upon existing theory. There will be a discussion to assist in clarifying the terminology introduced in this chapter.

The Professional Social Worker and the Connection to the Key Variables

Professional social workers from a state's professional roster were the target population to examine the relationship between self-care agency and compassion satisfaction. A review of the literature showed that the compassion satisfaction

experienced by the social worker may contribute to mental, physical, and spiritual well-being of this individual and may also be a prime motivator for continued service, even though this worker's job deals with addressing clients who are in crisis situations or dealing with trauma as a result of crisis (Newell & MacNeil, 2010). Dane and Chachkes (2001) explained that the social worker has had a crucial role in healthcare since the introduction of the hospital social worker in the early 1900s. And, today the settings have grown encompassing a broad range of health care settings that require the social worker to intervene with survivors of trauma (Dane & Chachkes, 2001). This seemed to suggest that the nurse and the hospital social worker may encounter the same types of clients who may be experiencing crisis and trauma situations.

It was suggested that, if the social worker fails to contain reactions to the client's emotions, this individual may become susceptible to changes in self belief systems (Miner et al., 2005). Bride et al. (2007) suggested that there can be the development conspicuous disruptions in the social worker's personal sense of meaning and the social worker's own world view (p. 155); and there can be the onset of feelings of hopelessness (p. 155) in this professional. Rosen and Evdokas (2004) explained that it is "cognitions or appraisal, or how the social worker interprets a situation, [which] tends to cause the individual to feel emotions" (p. 1). Clarifying, Matsumoto (2001) suggested that "emotions give meaning to life, serve as important motivators, and color our thoughts and cognitions" (p. 172). I believed that these positions put forward and supported the theory that there are both cognitive and affective reactions in the social worker that can take place as a result of the interaction of this worker and the traumatized client.

A review of the literature also suggested that the compassion shown by the social worker to the traumatized client can drain this professional's personal resources where this worker begins to experience exhaustion (Leon, Altholz, & Dziegielewski, 1999; Radey & Figley, 2007), or tiredness, to include the experience of emotional tiredness, which can be coupled with both physical and mental tiredness (Figley, 2007, p. 207). Krumer-Nevo, Slonim-Nevo, and Hirshenzon-Segev (2006) proposed that the social worker can begin to experience despair, helplessness, and frustration when dealing with clients and begin to suppress the motivation that is essential in the social work profession. And, as the social worker's continues to empathize with the traumatized client, this social worker can experience what Bride, Radey, and Figley (2007) termed compassion stress, leading to the development of compassion fatigue.

Compassion fatigue could be a factor in the high rate of turnover for the social worker profession, especially for the social worker in the child welfare settings (Naturale, 2007, p. 174). It was my belief that the results of various studies strengthen the proposal that the social worker engaged in direct practice was highly likely to be secondarily exposed to traumatic events of the client, were likely to experience at least some symptoms of secondary traumatic stress (Bride, 2007), and a significant minority of these professionals could also meet the diagnostic criteria for PTSD (p. 63). Additionally, Figley (1995) proposed that "compassion fatigue is identical to secondary traumatic stress disorder (STSD) and is the equivalent of PTSD" (p. xv).

Other studies involving constructs related to the construct were investigated in this study, one of which was secondary traumatic stress (Bride, 2007; Bride, Robinson,

Yegidis, & Figley, 2004; Gill & Weinberg, 2015; Lusk & Terrazas, 2015; Sprang et al.,

2011). Bride (2007) put forth that "the extant literature fails to document the prevalence

of individual secondary traumatic stress symptoms and the extent to which diagnostic

criteria of PTSD are met as a result of work with traumatized populations" (p. 63). This

concern was addressed in a study conducted by Bride (2007) with 600 social workers

where he investigated the prevalence of secondary traumatic stress by examining the

frequency of individual symptoms, the frequency with which diagnostic criteria for

posttraumatic stress disorder are met, and the severity of secondary traumatic stress

levels" (p. 63). It was found that, for the social worker in the direct practice of coming

into contact with traumatized populations, it is highly likely for this individual to be

secondarily exposed to traumatic events; that many individuals are likely to experience at

least some symptoms of secondary traumatic stress (p. 63); and a significant minority of

individuals may meet the diagnostic criteria for PTSD (p. 63).

Gill and Weinberg (2015) also examined secondary traumatic stress in the social

worker; Lusk and Terrazas (2015) examined secondary trauma in caregivers; Sprang,

Craig, and Clark (2011) examined secondary traumatic stress and burnout in child

welfare workers; and, it was Bride et al. (2004) who developed and validated the

Secondary Traumatic Stress Scale. There have also been studies that have examined

compassion fatigue (Bourassa, 2012; Harr & Moore, 2011; Kapoulitsas & Corcoran,

2015); studies that have examined burnout (Ding, Yu, & Wang, 2014); studies that have

examined all three aspects of compassion which include compassion fatigue, compassion

satisfaction, and burnout (Jacobson, 2012; Slicum-Gori et al., 2011; Sprang et al., 2007;

Thomas, 2013); and studies that use the ProQOL Scale incorporated as measurement instruments (Harr & Moore, 2011; Jacobson 2012; Ray et al., 2013; Smart, English, James, Wilson, Daratha, Childers, & Magera, 2014; Sprang et al., 2011; Khan et al., 2015), which were also used in this study.

The study by Killian (2008) was similar to this study where I examined compassion fatigue, burnout, and self-care that also used a questionnaire. However Killian (2008) as well as Lusk and Terrazas (2015) used a multi-methods approach that included qualitative methodology of interviews and questionnaires. Bourassa (2012) and Kapoulitsas and Corcoran (2015) examined similar constructs using qualitative methodology; and Ben-Porat and Itzhaky (2014), Gill and Weinberg(2015), Jacobson (2012), Sprang et al. (2011), Tabaj et al. (2015), and Thomas (2013) conducted studies that used similar analysis techniques used in this study including regression analysis.

I perceived a weakness in research on the variables under study. In the majority of previous studies the social worker has been grouped with other professional in research studies. Sprang et al. (2007) suggested that there were only a few epidemiological studies on the topic of compassion fatigue or secondary trauma among different groups of professionals (p. 261), with many researchers taking a cross-sectional approach to their studies. This tends to work against specific generalizability of research to the social work profession.

The social worker was frequently grouped with other professional populations in research studies when examining the construct of compassion. This grouping was observed in several studies.

- The study by Tabaj et al. (2015) used self-report measures with 118 professionals, including social workers, where the findings showed that this group of professionals experienced a medium high level of stress (p. 113).

- The study by Sprang et al. (2007) grouped 1,121 of mental health professionals together, which also included social workers, and found that 13% of that group of participants were at high risk of compassion fatigue or burnout (p. 271).

- Sprang et al. (2011) conducted a comparative study across groups with 669 participants where they sought to describe predictors of secondary traumatic stress and occupational distress across professional groups. And, based on their findings, they were able to proposed strategies for enhancing self-care based on the child welfare population of professionals under study.

These studies supported the contention that the social worker was frequently group with other professionals in research studies. However, it also showed that the social worker and the other groups tended to have similar experiences related to clients who are in crisis or trauma, or what Trochim (2008) may suggest as being proximally similar.

Compassion Satisfaction: The Dependent Variable

Compassion satisfaction was the DV, or criterion variable in this study. There have been studies that have focused on the concept of compassion, and these studies have included both the subconstructs of compassion satisfaction and compassion fatigue, and have focused on the negative aspects of the construct of compassion. However, recent literature has suggested that there should be a conceptual framework shift which also focuses on positive elements that lead the social worker towards flourishing in the

profession (Harr & Moore, 2011, p. 351; Radey & Figley, 2007; Stamm, 2010). This study's main focused was on self-care agency and compassion satisfaction in the professional social worker.

Stamm (2010) proposed that

- When one experiences compassion satisfaction, this individual experiences a pleasure in doing the jobs well (p. 28).

- With compassion satisfaction, one may experience a pleasure in doing the jobs well (p. 28).

- There is a 'sense of positivity' surrounding this individual's perception of the ability to positively contribute to the work setting and a 'positivity' surrounding colleagues (p. 28).

- When an individual experiences compassion satisfaction, there is the experience of happy thoughts, feelings of successful, and happiness with the work that is done; and a desire to continue to doing it, with a belief that the work done can make a difference (p. 21).

In a study of 31 professionals and paraprofessionals who provided care to refugees conducted through an interview analysis, Lusk and Terrazas (2015) found that 90% of the participants reported that they gained satisfaction from helping people and believed that they made a difference through their work; and all the respondents reported being proud of the work they do and being happy that they chose this line of work (p. 263). This prospective appeared to complement the literature of Yi-Chang et al. (2014) suggesting

that employees that feel satisfied in doing their work (p. 1538), or happy employees

perform better than unsatisfied employees or unhappy employees (p. 1538).

Empathy

Empathy was also considered a tool that the social worker used frequently to

establish a healing relationship (Baranowsky & Gentry, 2010) with the traumatized

client. King and Holoako (2012) suggested that "empathy is a core principle of social

work" (p. 174); however, "minimal research has been undertaken by social work

researchers" (p. 174) in this area. It is also proposed that "empathic engagement" (Bride

et al., 2007) can be a source of the disruption of the social worker's own world view (p.

201) and it can lead to the social worker becoming either self-focused or prosocial

(Thomas, 2013). This showed that there was a continuum with positive and negative

affect.

Empathy or empathetic interaction is "a multifaceted, multidimensional,

processual construct" (Thomas, 2013, p. 366) including two components of empathy:

"affective sharing" and capacity for "self-other differentiation" (p. 367). These

components were believed to be very relevant to this study on compassion. It was

suggested that when using empathy, the social worker "needs the mental flexibility to

shift into and out of the perspective of the person [being] observed" (p. 367). And, Figley

(2002) suggested that when one is being empathetic, one is investing oneself emotionally

with the client who is suffering, and thus may take no notice of personal self-care needs,

which can lead to compassion fatigue. Drawing from the literature, it appeared that there

was support for the contention that empathy and empathy-related responses are believed

to be a main conduit to the development of secondary stress disorder (Figley, 2002) and compassion fatigue.

Thomas (2013) proposed that empathy is important for the social workers if this individual is to become effective helper of clients. However, the empathetic interaction in social worker is complicated where the empathy shown by these social workers can lead to complications for the social worker in terms of their "affective, cognitive, and self-regulatory capacities" (p. 365); and there may be different motivational and behavioral outcomes. Based on Thomas (2013), and relevant to this study is that empathy also appears to be an important conduit in the development of secondary stress disorders (p. 365).

Empathy and empathetic strain have not been examined to a great extent in relation to the social worker's professional quality of life (Fahy, 2007), which included both the positive and negative aspects of this professional's job. With the affective nature of empathy, there appeared to be an "emotional reaction to cues transmitting the emotional experience of another" (p. 859). And when the social worker shows empathetic concern, this individual may experience "feelings of sympathy, compassion, [or] warmth while observing a distressed" (p. 859) client. Some associate this response to altruism where there is the desire to help with the goal of increasing the client's welfare (p. 859). Based on the literature I suggested that this may be a reason that this individual chose the helping profession of social work.

The Figley model of compassion fatigue appears to be based on assumptions about empathy and emotional energy (Figley, 2002, p. 1436), or what Austin et al. (2009)

may term empathy and emotional investment (p. 195). In the Figley model of compassion fatigue "empathy and emotional energy are the driving forces when working with the suffering normally and when attempting to establish and maintain an effective therapeutic relationship" (Figley, 2002, p. 1436). A review of the literature showed that the social worker's empathetic work with clients who are traumatized could have a gathering effect over time; and Smart et al. (2014) tended to concur suggesting that compassion fatigue tends to be the "progressive, cumulative product of prolonged, continuous, and intense contact with patients and exposure to stress" (p. 3). Although empathy is the tool that the social worker frequently uses to establish a healing relationship (Baranowsky & Gentry, 2010), it was proposed that "empathic engagement" (Bride et al., 2007, p. 201) can even interfere with the social worker's own world view. This was supported by Houston (1990) and Thomas (2013) that empathy has been characterized as having both affective and cognitive components.

The impacted social worker "can have a vicarious affective response to the client's distress, along with a cognitive awareness of the client's internal states, including thoughts and feelings" (Houston, 1990, p. 859). And, Thomas (2013) tended to support the contentions that empathy and empathetic interaction in social worked may lead to personal disturbances for this individual (p. 365). Additionally, Figley (2002) suggested that "the very act of being compassionate and empathetic extracts a cost under most circumstances…in our effort to view the world from the prespective of the suffering, we suffer" (p. 1434). These assumptions supported the need for a focus on self-care agency in the professional social worker.

Positive Affect

Positive affect tended to be linked to compassion satisfaction. Isik and Üzbe

(2015) suggested that the concept of positive affect tends to denote a combination of

joviality, mental alertness, willingness, and determination (p. 588); while Fredrickson and

Losada (2003) proposed that when the social worker has positive affect, this quality can

predict resiliency and facilitate behavioral flexibility; and positive affect enhances coping

strategies, where the social worker can draw upon personal resources during incidents of

stress. Lusk and Terrazas (2015) who suggested that a key strategy for coping with

repeated contact with traumatized clients is to build positive affect (p. 261). When

examining the concept of positive and negative affect in relation to subjective well-being,

it was suggested that positive affect tends to equip the social worker with an adaptive bias

to approach novel situations where optimal mental health tends to be associated with high

positive to negative affect (Fredrickson & Losada, 2003). Fredrickson and Losada (2003)

proposed that when the social worker has positive affect, this quality can predict

resiliency and facilitate behavioral flexibility; and positive affect tends to enhance coping

strategies, where the social worker can draw upon personal resources during incidents of

stress. A review of the literature showed that the term affect tended to refer to the positive

quality of emotions and moods (Miner et al., 2005, p. 171); and Çivitci (2015) suggested

that positive affect tends to reflect the degree to which the social worker "feels energetic,

enthusiastic, cheerful, active and alive" (p. 567). Yi-Chang et al. (2014) suggested that

the social worker's emotions and feelings are a significant part of team cooperation (p.

1537) in the work environment; and Miner et al. (2005) suggested that a good way to

grasp the idea of affective work behaviors in the work environment is to give attention to the employee's mood and emotions; whereas cognitive-based behaviors tend to best predictor the employee's job satisfaction (Yi-Chang et al., 2014, p. 1537). Miner et al. (2005) and Yi-Chang et al. (2014) tended to agree that affect and mood in the work environment are important factors in job attitudes and behavior.

Fisher (2002) proposed that affect at work is receiving increasing attention in research (p. 3). Fisher (2002) also suggested that researchers were beginning to posit that

Positive and negative affect systems in the brain are separate, operate largely independently, and are activated by different stimuli …[where] events that satisfy the individual's goals, or promise to do so, yield positive emotions; events that harm or threaten the individual's concerns lead to negative emotions. (p. 7)

Miner et al. (2005) proposed that affect or mood was an important predictor in a variety of job behaviors, where "affect includes both specific emotions and more dispersed moods" (p. 171). This appeared to support the contention that moods and emotions are also multidimensional constructs (p. 171). Based on the review of the literature, I suggested that the practice of self-care is a potential mechanism that can increase the social worker's positive affect in the work environment.

Clarifying the Concepts Related to the Negative Aspects of Compassion

The use of both subconstructs of compassion, compassion satisfaction and compassion fatigue, was supported the by Stamm (2002). Stamm proposed that it was not possible to understand the positive aspects of compassion satisfaction without knowledge about the negative aspects associated with compassion. However, before discussing the

negative aspects of compassion and its relation to the DV of compassion satisfaction, I provided literature that attempted to clarify the terminology related to the negative aspects of the construct. And, a review of the literature revealed that there were multiple terms used to describe the negative effects and reactions for individuals who work with traumatized clients. The most common terms are compassion fatigue, secondary traumatic stress, vicarious traumatization and burnout (Choi, 2011, p. 225; Dane & Chachkes 2001, p. 33; Newell & MacNeil, 2010, p. 60; Stamm, 2010, p. 9), each of which will be discussed separately in this chapter.

One of the subconstructs of compassion, compassion fatigue, has been associated with concepts like "secondary traumatic stress disorder, vicarious traumatization, secondary victimization, or co-victimization, compassion stress, emotional contagion, and counter-transference" (Austin et al., 2009, p. 195), or what Sprang et al. (2007) would probably call a myriad of terms to describe similar phenomena (p. 261). However, James (2008) proposed that "as these terms have evolved, [and] have taken on somewhat different, more discrete meanings" (p. 538). In addressing the concept, Dane and Chachkes (2001) suggested that these concepts evolved out of "empathetic attunement" (p. 33) to define the responses that an individual may have when hearing about other's traumatic experiences (p. 33). Thomas (2013) also emphasized a weak point in the clarity of the terminology and the difficulty in operationalizing empathy-related constructs (p. 376). Ultimately, Stamm (2010) suggested that there were only fine distinctions between the terms and that there was not enough differentiation to adequately pronounce that the terms are truly diverse because of the issues in describing the terms.

In a discussion of the diversity in terminology associated with the negative effects and reactions for individuals who work with other traumatized individual (Baird & Kracen, 2006; Newell & MacNeil, 2010, p. 60), it was suggested by Newell and MacNeil (2010) that the terms and conditions used to discuss the phenomenon are distinct from each other, and that the terms are often incorrectly used interchangeable in the literature. And, because there is a lack of conceptual clarity in the terms (Adams et al., 2006 p. 104; Harr & Moore, 2011, p. 351), some may have difficulty understanding and interpreting existing research (Elwood et al., 2011, p. 26). Consequentially, there has been difficulty in synthesizing many research findings (Baird & Kracen, 2006); and there has been difficulty in building evidence-based theory pertaining to the terms (Baird & Kracen, 2006). However, Stamm (2010) summarized that as the research progresses reconfiguration of the terms will likely occur (p. 9).

The terms used to describe the phenomena have also been compared and contrasted with each other. However, compassion fatigue and secondary traumatic stress were addressed as the same subconstruct in this literature review with an important distinction that was noted. Even though the terms are often used interchangeable, when examining the terms, the literature suggested that there is a distinction between compassion fatigue and secondary traumatic stress that should be put forth in the literature. Elwood et al. (2011) suggested that the distinction is noteworthy for the reader. It was suggested that secondary stress can be observed in a variety of populations, whereas when one refers to compassion fatigue one is generally referring to an individual in the helping profession (p. 26). The helping profession of social work was the focus of

this study. Additionally, Sprang et al. (2011) proposed that compassion fatigue was popularized by Figley as a less stigmatizing way to describe secondary traumatic stress (p. 151). The term compassion fatigue tends to be a more comprehensible or user-friendly term for secondary traumatic stress disorder (Harr & Moore, 2011, p. 351).

Another noteworthy distinction found in the literature was one between secondary traumatic stress and vicarious traumatization given by Newell and MacNeil (2010). The distinction between secondary traumatic stress and vicarious traumatization is that one should consider vicarious traumatization as a 'cognitive process' resulting from chronic direct practice with trauma populations (p. 60). Here, there may be observed modifications in one's thoughts and beliefs about the world in key areas such as safety, trust, and control (p. 60). Conversely, in secondary traumatic stress the focus tends to be placed more on the external 'behavioral symptoms' instead of the intrinsic cognitive changes (p. 60). And, for the individual exposed to the trauma of other, secondary traumatic stress and vicarious traumatization can happen separately or as co-occurring conditions (p. 61).

Howlett and Collins (2014) suggested while the term compassion fatigue does closely correspond to the definition of vicarious traumatization, it is a more general term having two conceptual problems (p. 182). It was suggested that compassion is 'a way of being' (p. 182) and therefore implies that a negative response from the social worker to a client "is linked to the action of showing compassion rather than the result of the client's trauma" (p. 182). Further, they proposed that the term fatigue also suggests physical or mental exhaustion, which are not necessarily considered symptoms for the social worker

(Howlett & Collins, 2014, p. 182). Adams et al. (2006) suggested that research conducted related to compassion fatigue has encountered several problems (p. 104) including questions and concerns focusing on a lack of conceptual clarity about what actually constitutes compassion fatigue (p. 104), and questions on how compassion fatigue is different from other adverse work outcomes like burnout (p. 104). And, according to Adams et al. (2006), there were no studies at that time that fully incorporated all aspects of Figley's (1995; 2005) description of compassion fatigue (p. 104).

In actuality, compassion fatigue/secondary traumatic stress is a condition that has perhaps been observed continually since individuals have lived together and cared for each other (Baranowsky & Gentry, 2010, p. 8); where it can be considered to be a "natural consequence to helping others" (Elwood et al., 2011, p. 26). And, even though stress and coping are not novel terms or concepts in the literature (Yonder, 2010), the term compassion fatigue is a more recent term or concept (Baranowsky & Gentry, 2010; Yonder, 2010). Additionally, one can now find the term compassion fatigue being used more in the social work literature (Harr & Moore, 2011, p. 351). I suggested that these proposals revealed a new awareness of the construct of compassion as it relates to the helping professional.

Compassion Stress

Radey and Figley (2007) defined compassion stress as "the stress connected with exposure to a sufferer" (p. 207). And, as a consequence, the social worker may not be able to deal with what Fahy (2007) termed the empathetic strain, which may lead to compassion fatigue. Leon et al. (1999) proposed that

Compassion stress is "the stress connected with exposure to a sufferer and the ability to notice the pain of others (p. 47); that this empathetic ability, combined with empathetic concern…can eventually lead to compassion stress" (p. 47). The conclusion was that "compassion and a motivation to provide help, can lead to compassion stress". (p. 47)

Craig and Sprang (2010) suggested that "optimal stress …can produce exhilaration, high motivation, mental alertness, high energy, and sharp perception, [and] is ideal …[however] too often the levels of stress become excessive and threaten to overwhelm the professional's self-efficacy" (p. 319). Additionally, Figley (1998) suggested that some social workers may not be able to let go of the compassion stress that they are experiencing, and this affected social worker may not be able to effectively deal the compassion stress that seems trapped. I suggested that these proposals revealed the progressive dangers of compassion stress to the professional social worker.

According to Radey and Figley (2007), compassion is a necessary building block in effective direct social work practice requiring the social worker to establish a rapport by using compassion and empathy when assisting the client. But, this process can overtax the social worker who can begin to experience compassion stress leading to compassion fatigue. And, Smart et al. (2014) suggested that if left unchecked, compassion fatigue can lead to permanent changes in the social worker's compassionate abilities (p.4). This suggestion seemed to be echoed by Khan, Khan, and Malik (2015) who also proposed that "compassion fatigue is a condition characterized by a gradual lessening of compassion over time" (p. 291). Austin et al. (2009) proposed that there can also be a

disengagement or lack of empathy by the social worker (p. 195), and Zaki (2014) suggested that empathy can also induce abstract forms of negative affect (p.1615).

Federickson and Losada (2003) proposed that high positive-to-negative affect tends to be associated with optimal mental health. Additionally, Craig and Sprang (2010) tended to agree with the assumption by proposing that the individual can realize exhilaration, high motivation, mental alertness, high energy, and sharp perception, in the social work profession, but the level of stress can become excessive and overwhelm the social worker's self-efficacy (Craig & Sprang , 2010), and lead to compassion fatigue. Based on a review of the literature, I proposed that both empathy and positive affect were related to the construct of compassion and its subconstruct of compassion satisfaction and should be included in the literature on compassion in this study.

Compassion Fatigue/Secondary Traumatic Stress and Related Terminology

In the literature and research I found that both secondary traumatic stress and compassion fatigue are used interchangeably (James, 2008), where one should keep in mind a major demarcation of Elwood et al. (2011) suggesting that secondary stress can be observed in a variety of populations, whereas compassion fatigue generally refers to an individual in the helping profession (p. 26). Baranowsky and Gentry (2010) credited Figley with the introduction of the term compassion fatigue (p. 11). It was also Figley who first introduced the model of compassion fatigue in 1995 (Figley, 2002), and with the publication of his first book on compassion fatigue in 1995, the role of empathy and traumatic experiences has also gained a newfound appreciation in the literature and research (Figley, 2002, p. 1436). Since that time, it is also acknowledged that the term

compassion fatigue has been interchanged with the term secondary traumatization, where both are proposed to be "a natural consequence to helping others" (Elwood et al, 2011, p. 26). Figley (2002) defined compassion fatigue as state of tension and preoccupation with traumatized client where the social worker professional can begin to re-experience the traumatic events of their client, begin to exhibit symptoms that include avoidance or numbing reminders, and have persistent arousal-like anxiety that tends to be associated with the client (p. 1435). This is what Yoder (2010) may suggest as being akined to having emotional affect resulting from working with traumatized clients (p. 190).

In a study by Bride et al. (2004) with 282 social worker participants, it was found that the most frequently reported symptom was intrusive thoughts that were related to the traumatized client (p. 65); that 40.5 % reported having thoughts about their clients without intending to; experiencing psychological distress or physiological reaction in response of reminders of the issues presented by the traumatized clients; 5% reported reliving the trauma of their clients; 10.8% reported avoidance of people, places and things that reminded them of the client's trauma; 31.6 percent reported avoidance of the traumatized clients; and 5.% reported disturbing dreams related to the traumatized client (pp. 65-66). In other words, the study conducted by Bride et al. (2004) supported the contention that when the professional enters the world of the client, the worker may begin to "suffer as the client suffers" (Figley, 2002, p. 1434).

Baranowsky and Gentry (2010) tended to be in agreement suggesting that the far-reaching effects of the client's trauma on the social worker can also take the form of PTSD-like symptomology where the social work's reactions appear to mimic the

disturbances of the client (p. 8). James (2008) proposed that secondary traumatic stress disorder/compassion fatigue is "similar and parallel to PTSD except that the exposure is to the person relating the event and not to the event itself" (p. 538). There was literature to support that the position that the DSM-IV acknowledged and supported the contention that an individual can be traumatized by secondary exposure to events directly experienced by another (Baranowsky & Gentry, 2010, p. 8).

Evidence to support these arguments was observed in a study by Lusk and Terrazas (2015) where they conducted a study with structured interviews and self-measures with 31 professionals and paraprofessionals from 10 different legal aid offices and counseling centers working with Mexican and Central American refugees. It was found that "more than 50% of the participants reported experiencing occasional numbness, troubling sleeping, intrusive thoughts, and being easily annoyed" (p. 263). They found that their Secondary Traumatic Stress Scale revealed that all participants reported thinking about their clients to some degree when they did not intend to, 83.8% reported having trouble sleeping, 87.5% reported having trouble concentrating (p. 263). This current study also used a questionnaire to obtain data on secondary traumatic stress.

Additionally, Gill and Weinberg (2015) conducted a study with 160 social workers using hiearchial regression analysis to explore the association between coping, internal resources, demographic and work characteristics, and secondary trauma (p. 1). It was found that (a) emotion-focused and avoidance coping strategies, (b) previous history of exposure to a traumatic event, and (c) high exposure to traumatic material through clients were associated with increased levels of secondary trauma; while (d) dispositional

optimism, (e) mastery, and (f) steady supervision were associated with the reduction of those symptoms (p. 1). Regression analysis including hierarchical regression was also used in this current study.

A recent cross sectional comparative study of compassion fatigue with 254 health care providers was conducted by Khan et al. (2015) to measure the frequency of compassion fatigue in military health care providers (p. 286). Using the ProQOL-5 Scale with a Cronbach's alpha score of .81, showed that 31.1% revealed low compassion fatigue, 66.1% showed average compassion fatigue, and 2.8% showed high compassion fatigue. It was also determined that compassion fatigue was significantly different in doctors, nurses, and nursing assistants (p value < 0.049). It was also concluded that compassion fatigue was higher in doctors as compared to para medical staff irrespective of gender (p. 291).

Baranowsky and Gentry (2010) suggested that compassion fatigue has probably been in existence for as long as humans have cared for each other (p. 8); and while the concepts of stress and coping ability are not new (Yonder, 2010), compassion fatigue is a more recent term or construct (Baranowsky & Gentry, 2010; Ocwhberg, 1998; Yonder, 2010). Newell and MacNeil (2010) described secondary traumatic stress as "the natural, consequent behaviors and emotions resulting from knowledge about a traumatizing event experienced by a significant other" (p. 60); the bearing witness to the intense or horrific experiences of that particular person's trauma (p. 60); and it was contended that certain symptoms may develop in the course of bearing witness to the suffering of others (Figley, 2002, p. 1435). Compassion fatigue could be further divided into two parts. Both Adams

et al. (2006) and Baranowsky and Gentry (2010) proposed that compassion fatigue

includes two components: secondary traumatic stress, and burnout. One of the

instruments used in this study, the ProQOL Scale, divided compassion fatigue into the

subconstructs of secondary traumatic stress and burnout which were also examined in this

study.

When considering the literature of Figley (2002) that suggested that when the

social worker is being empathetic and investing emotionally with the suffering client and

not take notice of personal self-care needs, Smart et al. (2014) suggested that the affected

social worker may also experience profound emotional reactions when attending to the

suffering of others (p. 3). The phenomenon of compassion fatigue tends to describe the

behaviors and emotions seen in the affected worker (Kapoulitsas & Corcoran, 2015, p.

87). Austin et al. (2009) suggested that when compassion fatigue is experienced, it can

also create a sense of hopelessness in the social worker where there can be a perceived

inability to affect positive change (p. 195); the social worker may begin to embrace an

inability to rescue the client (Yoder, 2010, p. 195); one may observe that the social

worker may begin to shield from or become distant to the suffering client (Austin et al.,

2009, p. 195); or the social workers may display a reduced ability to function at work,

home, and within personal relationships (Baranowsky & Gentry, 2010, p. 8).

Burnout

The two components of compassion fatigue are secondary traumatization and

burnout (Adams et al., 2006; Baranowsky & Gentry, 2010, p. 8) where there are also

various definitions of burnout. Stamm (2010) suggested that:

Burnout is the part of compassion fatigue that is characterized by feelings of

unhappiness, disconnectedness, and insensitivity to the work environment (p.

21)… It can include exhaustion, feelings of being overwhelmed, bogged down,

being 'out-of-touch' with the person he or she wants to be, while having no

sustaining beliefs. (p. 21)

Maslach (1976) suggested that burnout reflects an uneasy relationship between

people and their work (p. 44). Burnout has also been defined as (a) a syndrome of

emotional exhaustion and cynicism that occurs with individuals who do 'people work' of

some kind (Maslach & Jackson, 1981, p. 99); (b) "a state of physical, emotional, and

mental exhaustion caused by long term involvement in emotionally demanding

situations" (Malach-Pines, 2005, pp. 78-79; Pines & Aronson, 1988, p. 9); (c) "a

prolonged response to chronic emotional and interpersonal stressors on the job, …

defined by "the three dimensions of exhaustion, cynicism, and inefficacy" (Maslach,

Schaufeli, & Leiter, 2001, p. 397); (d) "the exhaustion of employee's capacity to

maintain an intense involvement that has a meaningful impact at work" (Schaufeli,

Leiter, & Maslach, 2009, p. 205); or (e) the "presence of emotional exhaustion and the

feeling of disconnection from others" (Elwood et al., 2011, p. 26). A contention of

Williams (1998) was that, when considered separately, it is easier to recover from

compassion fatigue than it is to recover from burnout (Williams, 1998).

The literature showed that job burnout surfaced as a significant concept in the

1970s (Maslach et al, 2001, p. 398; Schaufali et al., 2009, p. 204) and Perron and Hiltz,

2006, p. 218) and Lambert et al. (2015) credited Freudenberg as coining the term burnout

(p. 1). In the 1980s it was observed that there was a shift to more systematic, empirical

research on burnout utilizing questionnaires and survey methodology with larger groups

of participants (Maslach et al., 2001, p. 401), and industrial-organizational psychology

also made theoretical and methodological contributions to research (p. 401). Earlier

research on the phenomenon of burnout tended to be exploratory and depended a great

deal on observations, interviews, and surveys of smaller groups of participants (Maslach

& Jackson, 1981, p. 100). Consequentially, through the compilation of the data and the

emerging findings, it was postulated that there was a specific set of symptoms linked to

the phenomenon of burnout (p. 100).

  Outcomes associated with burnout. Maslach et al. (2001) summarized the

syndrome of burnout suggesting that in burnout, one can find overwhelming exhaustion,

feelings of cynicism and detachment from the job, and a sense of ineffectiveness and lack

of accomplishment (p. 399). Additionally, Maslach and Jackson (1981) put forth that the

negative attitude among human service professionals has been well documented in the

literature (p. 99). And, of the three aspects of burnout - exhaustion, cynicism, and

inefficacy - it was suggested that "exhaustion is the most widely reported and the most

thoroughly analyzed" (Maslach et al., 2001, p. 403), and the most noticeable

manifestation of this multipart syndrome (p. 402). Conversely, it was also suggested that

if the social worker moderates the compassion shown for the client, it may be perceived

as emotional distance or detached concern or a "way of protecting [oneself] from intense

emotional arousal that could interfere with functioning effectively on the job" (Maslach

et al., 2001, p. 400). A premise that emerged from the research of Maslach et al. (2001)

was a conceptualization of job burnout as a psychological syndrome resulting from chronic interpersonal stressors on the job (p. 399).

In attempting to illuminate characteristics associated with the syndrome of burnout, it was suggested that there may be noticeable negative reactions such as increased feelings of emotional exhaustion and the development of negative, cynical attitudes and feelings surrounding clients (Maslach & Jackson, 1981, p. 99); and there may be "an imbalance or excessive detachment and little concern [which seems] to lead staff to respond to clients in negative, callous, and dehumanized ways" (Maslach et al., 2001, p. 400). Maslach and Jackson (1981) suggested that the social worker may begin viewing the client as, in one way or another, deserving of their troubles (p. 99); and there may be a subsequent deterioration in the quality of care provided to the client (p. 99). Additionally, Krumer-Nevo et al. (2006) suggested that the affected social worker may begin to experience despair, helplessness, and frustration when dealing with clients and begin to suppress the motivation that is essential in social work profession. And, as the social worker's emotional resources become depleted, the social worker may no longer feel able to give individually at a psychological level (Maslach & Jackson, 1981, p. 99).

Ben-Porat and Itzhaky (2014) suggested through theoretical literature, that there appeared to be a consensus regarding a high potential for burnout in the social work profession (p. 2). This phenomenon of burnout has been referenced frequently in areas related to human services workers (Maslach et al., 2001, p. 397), "including the areas of healthcare, social work, psychotherapy, legal services, and police work" (Schaufali et al., 2009, p. 206). And, within the helping profession, the syndrome of burnout has also

fostered research on various variables (p. 204). Maslach et al. (2001) suggested that

burnout has been viewed as a form of job stress and related to such concepts as job

satisfaction, organizational commitment, and turnover (p. 401). Additionally, Lambert et

al. (2015) appeared to put forth that job burnout may be associated with higher levels of

turnover, or desire to leave the job (p. 1). Two important assumptions put forth in the

literature and relevant to this study were that burnout appears to be a factor in job

turnover (Maslach & Jackson, 1981, p. 99), and that burnout can emerge after extreme

cases of either vicarious traumatization or compassion fatigue (Sansburg et al., 2015, p.

115). Conversely, Yonder (2010) suggested that compassion satisfaction can have a

positive effect on burnout and compassion fatigue, but proposed that more research is

needed to support this premise (p. 195).

The implications of burnout for the individual and the workplace hinges upon

significant outcomes (Maslach et al., 2001, p. 406). In early research burnout outcomes

appeared to be correlated with the characteristics of "personal distress, physical

exhaustion, insomnia, increased use of alcohol and drugs, and marital and family

problems" (Maslach & Jackson, 1981, p. 100); and Goncher et al. (2013) suggested that

distress, burnout, and vicarious traumatization of the social worker can effect the services

that are rendered by this worker. Based on the postulation that the social worker's

workplace tends to shape how this individual interacts with others (Maslach, 1976, p. 49),

an imperative conjecture from the literature was that "the consequences of burnout are

potentially very serious for the staff, the clients, and the larger institutions in which they

interact (Maslach & Jackson, 1981, p. 99). It is proposed that "the burnout phenomenon

has grown from a specialized occupational hazard to a pervasive workplace hazard" (Schaufali et al., 2009, p. 210).

Lambert et al. (2015) proposed that burnout has previously been observed as an antecedent, but has been less observed for the possible outcomes in the population of correctional staff members (p. 1). In their study of the phenomenon of burnout with 272 correctional prison staff participants, Lambert et al. hypothesized that emotional burnout was positively correlated to correctional staff turnover intent (p. 6). Their results showed that emotional burnout was directly related to increases in turnover intent (p. 10). Additionally, Ben-Porat and Itzhaky (2014) suggested that "in recent year there has been an increasing interest in the negative consequences for therapists working with trauma victims" (p. 1).

Variables that influence burnout. Elwood et al. (2011) suggested that, in addition to job related stress, burnout tends to center on workload and interpersonal conflict with colleagues (p. 26). The mounting quantity of literature on burnout showed that it is currently a well-established scholarly area of discussion that has produced thousands of publications (Schaufali et al., 2009, p. 204). Of particular interest was the work of Ben-Porat and Itzhaky (2014) who conducted a study of burnout among with 214 social worker participants who worked with victims of trauma. Their findings showed that the phenomenon burnout was significantly influenced by the variables of (a) age, (b) past exposure to trauma, (c) self-esteem, and (d) mastery (p. 1), and (e) those young workers and workers who have a history of trauma were particularly susceptible to burnout (p. 10).

When considering the young social worker or the social worker beginning a career, Harr and Moore (2011) conducted a pilot study with 258 BSW and MSW field students at a public university. They looked at the psychological effect of compassion fatigue and compassion satisfaction on social work students in field placement and found that the risk for compassion fatigue during field experience was similar to that of more experienced helping professionals (p. 350). However, they found that burnout scores were somewhat higher than those of other helping professionals (p. 350).

Background variables and personal resources. The study of Ben-Porat and Itzhaky (2014) attempted to identify background variables, personal resources, and environmental resources that can moderate burnout (p. 9) with 214 social worker participants who worked with victims of trauma. They found that burnout in this group of participants was average. The study also revealed that the social worker's background variables and personal resources played a significant role in enabling them to cope with burnout. However, the role of environmental resources and support systems was not significant (p. 10).

Rephrasing burnout. Schaufali et al. (2009) put forth that developments in science have reinforced a positive turn in burnout research where there is the rephrasing of the phenomenon of burnout to be "an erosion of engagement" (p. 216). This seems consistent with the suggested that a recent emergence of positive psychology in organizations has increased the awareness for positive organizational behavior of employees. Relevant to the theories of Schaufali et al. (2009) and the perspective of the study, these scholars proposed that "the future of burnout lies in the realization that it constitutes the negative

pole of a continuum of employee wellbeing, of which engagement constitutes the

opposite positive pole" (p. 210). This further alluded to a proposed continuum of

compassion as put forth in this study and the value of conceptualizing the entire spectrum

of compassion.

Predictors of Compassion

Although there is still currently little known about predictors that affect the

outcomes seen in the construct of compassion (Slicum-Gori et al., 2011), the construct of

compassion continues to be investigated through current research (Bourassa, 2012;

Jacobson et al., 2013; Kapoulitsas & Corcoran, 2015; Lusk & Terrazas, 2014; Ray et al.,

2013; Slicum-Gori et al., 2011; Smart et al., 2014; Sprang et al., 2007). Thomas (2014)

conducted studies seeking to determine the negative and positive predictors associated

with compassion as I did in this study. I was seeking to build on the concept of a

continuum of compassion.

I suggested that researchers are now seeking to find buffers or better protection

from compassion fatigue for those professionals who practice empathy and compassion

with the traumatized client. Results of studies showed that boundaries and the

professional's discipline, gender and training are predictors of compassion. A review of

the literature also showed that a supportive work environment, work like condition, key

practice characteristics, and personal and organizational characteristics are some of the

variables that have been examined as predictor variables (Smart et al., 2014). It has also

been suggested that the identification of predictors can help in designing educational

interventions (Smart et al., 2014, p. 3). This study sought to provide empirical data to support the designing of educational tools for the professional social worker.

Boundaries. Boundaries were reported to counter compassion fatigue. Bourassa (2012) conducted a qualitative study with nine BSW and MSW level social workers where a goal of research was to identify and define the symptoms and potential repercussions of compassion fatigue (p. 701). The results showed that the adult protective services social worker tended to combine personal characteristics and professional factors to develop boundary mechanisms that protect them from experiencing the harmful symptoms and effects of compassion fatigue (p. 699).

The professional's discipline, gender, and training. Variables that have been studied in relation to the subconstructs related to compassion include an investigation with 1,121 mental health providers in a rural southern state by Sprang et al. (2007) who found:

- Female gender was associated with higher levels of compassion fatigue (p. 259).

- Therapists with specialized training in trauma work had higher levels of compassion satisfaction than non-specialists (p. 259).

- The professional's discipline was an important factor in compassion where the study showed that psychiatrists reported higher levels of compassion fatigue than their non-medical counterparts (p. 259).

- When using rural, urban, and rural with urban influence classifications, most rural professionals were undistinguishable from their urban counterparts in compassion

fatigue and compassion satisfaction scales, but did have increased levels of burnout (p. 259).

- The caseload percentage of PTSD clients that the professional treated predicted their levels of compassion fatigue and burnout (p. 273).

Supportive work environment. It was proposed that a supportive work environment may be a predictor of compassion. Kapoulitsas and Corcoran (2015) conducted semi-structured qualitative interviews with six social workers who worked with clients who had experienced distress. The goal was gaining insight into the experiences of these social workers (p. 86) and how these social workers developed personal, professional, and organizational resilience (p. 86). They found that a supportive work environment helped in promoting positive outcomes which may in turn reduce compassion fatigue (p. 96).

Work-like conditions. It was proposed that work like conditions may be a predictor of compassion. Using another professional population, Ray et al. (2013) conducted a non-experimental cross sectional study with 169 frontline mental health professionals to determine the relationship among compassion satisfaction, compassion fatigue, burnout, and work-like conditions (p. 455). They found higher levels of compassion satisfaction, lower levels of compassion fatigue, and "higher overall degree of fit in the six areas of work like conditions was predictive of lower burnout" (p. 455).

Personal distress. It was proposed that personal distress may be a predictor of compassion. Thomas (2014) conducted a study with 471 licensed clinical social workers examining the relationship between personal distress and other aspects of the empathy

construct and compassion satisfaction, compassion fatigue, and burnout using ordinary least squares multiple regression analysis (p. 371). It was found that higher personal distress is associated with higher compassion fatigue and burnout and lower compassion satisfaction among clinical social workers (p. 39).

Personal and organizational characteristics. Jacobson et al. (2013) conducted a one-group, cross-sectional research design to survey of 95 clergy participants from a cluster of Lutheran churches. They explored the relationship of personal and organizational characteristics, along with symptoms of depression, and clergy compassion fatigue, burnout, and potential for compassion satisfaction (p. 455). They found that clergy were at low risk for burnout, moderate risk for compassion fatigue, and they had moderate potential for compassion satisfaction. It was also found that years in service and depression significantly predicted burnout.

Client severity as a predictor. Smart et al. (2014) conducted a cross-sectional survey with 139 RNs, physicians, and nursing assistant healthcare personnel in a 250 bed facility. They investigated compassion fatigue and compassion satisfaction levels to identify variables that might improve aspects of professional quality of life (p. 3). It was found that individuals caring for critical patients scored significantly lower on the Professional Quality of Life subscales when compared to those working with a noncritical care unit (p. 3).

Cultural factors. In the study conducted by Lusk and Terrazas (2014) with 31 participants from 10 different legal aid offices and counseling centers of professionals working with Mexican and Central American refugees, it was revealed that more than

half of the respondents scored in the mild to no secondary traumatic stress range, suggesting that many respondents in this population had the capacity to cope with high levels of secondary exposure to trauma (p. 269). However, it was also put forth that participants were "more likely to avoid thoughts, feelings, or discussion about traumatic events or [were] able to modulate their exposure to traumatic content which could explain how half of the respondents did not present with secondary traumatic stress" (p. 269). It was suggested that this population was able to modulate their exposure to traumatic content through cultural protective factors.

Practice characteristics. Slicum-Gori et al. (2011) conducted a study with 630 hospice and palliative care workforce participants. One of the aims of the study was to understand how key practice characteristics interacted with compassion satisfaction, compassion fatigue and burnout (p. 172). A conclusion of the study was that health care systems could increase the prevalence of compassion satisfaction through both policy and institutional level programs (p. 172).

This current research study, *The Impact of Self-Care Agency and Compassion Satisfaction on the Professional Social Worker*, examined four research questions: RQ1 – Quantitative: Is there a significant relationship between self-care actions (M) and the exercise of self-care agency (IV) in the population under study?; RQ2 - Quantitative: Is there a significant relationship between the exercise of self-care agency (*IV*) and compassion satisfaction (*DV-1*) in the social worker population under study?; RQ3-Quantitative: Is there a significant relationship between self-care actions (*M*) and compassion satisfaction (*DV-1*) in the population under study?; and RQ4-Quantitative: Is

there a significant relationship between the exercise of self-care agency (*IV*) and

compassion satisfaction (*DV-1*) when controlling for the self-care actions (*M*) in the

population under study? There were two studies that relate these research questions in

this proposed study in the literature. These were the studies of Goncher et al., (2013) and

Gill and Weinberg (2015).

Goncher et al. (2013) conducted a study utilizing a correlational non-experimental

design with 262 doctoral-level participants where the mediational role of self-care was

examined. It is believed that their study and this current study were similar with the use

of an mediating/moderating variable design. Goncher et al. study revealed that self-care

should be paramount in both the practicing and training psychologist. Although the title

of their study did not contain the word mediating or moderating variable, Gill and

Weinberg (2015) conducted a study with 160 social worker participants where hierarchial

regression, a Pearson correlation, and analysis of variance revealed that dispositional

optimism and other internal resources are associated with reduction of symptoms related

to secondary trauma. This current study also used hierarchial regression and analysis of

variance to reach decisions about relationships and variances in the data.

Compassion as Emotional Effect

Yoder (2010) suggested that compassion fatigue is 'an emotional effect' resulting

from working with traumatized individuals where there may be an onset of guilt when the

social worker begins to perceive that the client cannot be rescued or saved from harm (p.

190). Additionally, Baranowsky and Gentry (2010) proposed that a symptom of

compassion fatigue may also include a 'silencing response' where the individual

suffering from compassion fatigue does not reach out for help. Krumer-Nevo et al. (2006)

suggested that, with compassion fatigue, the social worker may begin to experience

despair, helplessness, and frustration and may begin to suppress the motivation that is

considered essential in social work profession.

Killian (2008) conducted a study where 104 clinicians were administered a

questionnaire in the quantitative segment of mixed methods study. It was found that

social support, work hours, and internal locus of control accounted for 41% of the

variance in compassion satisfaction, multiple regression procedures accounted for 54% of

the variance in compassion fatigue and 74% of the variance in burnout (p. 32).

As a final point, the literature showed that very little is currently known about

factors or variables that promote or limit the positive outcomes associated with practicing

compassion (Slicum-Gori et al., 2011, p. 172). Therefore, one of the aims of this study

was to shed light on the research question asking if there was a statistically significant

relationship between self-care agency and the outcome variable of compassion

satisfaction. This questioning also applied to the dimensions of the exercise of self-care

agency used in this study.

Vicarious Traumatization

Clemans (2005) suggested that the term vicarious traumatization has been used to

highlight the "emotional, physical, and spiritual transformations" (p. 57) that is

experienced by the individual who assists traumatized clients. This individual takes in the

emotions, experiences, and reactions of the traumatized client (Dombo & Gray, 2013, p.

90). And, it was also within the concept of vicarious traumatization there can be a

transformation in an individual, like the social worker, as a result of empathetic

engagement with the client (Bober & Regehr, 2006, p. 1; Sansburg et al., 2015, p. 114;

van Minnen & Keijsers, 2000, p. 190) where one may observe a shift from the social

worker's own views to the client's traumatic affect (Sansburg et al., 2015, p. 115). If the

social worker fails to contain reactions to the client's emotions, the social worker may

become susceptible to belief system changes (Miner et al., 2005, p. 115), or one may

recognize a variety of responses that represent characteristics of vicarious traumatization

(Miner et al., 2005, p. 115). It is proposed that the responses of the social worker to

vicarious traumatization can encompass reactions ranging from changes in affect such as

anger, pain, and distress, to physiological effects like reduced energy levels or sleep

disturbances (Howlett & Collins, 2014, p. 181).

These changes may include

- Nightmares (vann Minnen & Keijsers, 2000, p. 190)

- Emotional responses like intrusive thoughts (p. 190)

- Intrusive images of violence (Clemans, 2005, p. 57)

- Unwanted and distressing images of the client's traumatic material cropping up
  between client sessions (Miner et al., 2005, p. 115)

- Changes in behavior like becoming hypervigilant (Dombo & Gray, 2013, p. 91)

- An amplified vigilance surrounding safety (Howlett & Collins, 2014, p. 181)

- Higher levels of stress, and anxiety (Cunningham, 2004, p. 307).

When the social worker sees the world in a negative way, feels unsafe, has a reduced

sense of self, a reduced connection to work, less interest in others, or has increased

negative affect, this social worker may be experiencing vicarious traumatization (Miner et al., 2005, p. 115).

When the social worker experiences of vicarious traumatization, there can be an inexplicable transformation in affect (Sansbury et al., 2015, p. 115). And, central to this statement was the argument that affect or mood is considered an important predictor of some job behaviors, and an essential factor when referencing job attitude (Miner et al., 2005, p. 117). The social worker experiencing vicarious traumatization may also experience anger or sadness (Sansbury et al., 2015, p. 115) to a degree that results in a pessimistic and cynical attitude (Cox & Steiner, 2013, p. 52), where these attitudes and behaviors can alter how the social worker interacts with colleagues and clients in the workplace environment (Sansburg et al., 2015, p. 115). Additionally, one may observe a decline in work production, poor morale, and lack of connection with colleagues (Dombo & Gray, 2013, p. 91). Vicarious trauma has also been described by Kadambi and Truscott (2003) as "a permanent and inevitable consequence of an empathetic connection with client's traumatic material" (p. 218).

Naturale (2007) suggested that the social worker may experience emotional states involving spiritual trust (p. 174), where there can be a transformation in spirituality. There may be spiritual anger at God, where the social worker may challenge prior religious beliefs (Dombo & Gray, 2013, p. 91). This suggested that vicarious traumatization can interfere with the social worker's spirituality (Clemans, 2005; Dane & Chachkes, 2001, p. 33; Newell & MacNeil, 2010, p. 60). Vicarious traumatization can be seen as a spiritual violation as well as a psychological violation to the social worker

(Dombo & Gray, 2013, p. 91). There appeared to be agreement in the literature reviewed

that reactions to the client's emotions may transform the belief system (Miner et al.,

2005, p. 115) of the social worker; and that these negatively altered beliefs may interfere

with the social worker's ability to maintain "hope and dedication to clients, communities,

and oppressed populations" (Cox & Steiner, 2013, p. 53). There may be transformations

in the social worker's value system where the social worker's values, moral principles,

and philosophy of life can also be altered through vicarious traumatization (Dane &

Chachkes, 2001, p. 35). And, when these disruptions occur, the social worker may exhibit

a sensitive "awareness of how fragile life can be" (Sansbury et al., 2015, p. 115).

Additionally, other scholars have relayed that when there is a shift or transformation; the

social worker's cognitive schemas may also be affected related to dependency and trust,

safety, power, esteem, and intimacy (Levin & Greisberg, 2003, p. 246; Newell &

MacNeil, 2010; Sansbury et al., 2015, p. 115; vann Minnen and Keijsers, 2000, p. 190).

This affected social worker may become suspicious and distrusting of others (Sansburg et

al., 2015, p. 115); and one may observe interpersonal changes such as social isolation,

difficulty in intimate relationships, and changes in parenting (Dombo & Gray, 2013, p.

91). Taken as a whole, in views of some of the scholars on the concept of vicarious

traumatization, trauma work can disrupt and distort the social worker's schemas (Dane &

Chachkes, 2001, pp. 34-35; van Minnen & Keijsers, 2000, p. 150). However, Dombo and

Gray (2013) suggested that recent literature on vicarious traumatization does not indicate

a pathology or weakness on the part of the social worker (p. 91).

Several scholars have suggested that vicarious traumatization can be envisioned as the cumulative transformation (van Minnen & Keijsers, 2000, p. 190) of the social worker's frame of reference (p. 190) related to the cognitive schemas (Howlett & Collins, 2014, p. 181). Additionally, van Minnen and Keijsers (2000) suggested that vicarious traumatization tends not to be specific to the interaction of the social worker with one client, but that vicarious traumatization refers to a cumulative effect over a period of time (p. 190), or cumulative client relationships (Cox & Steiner, 2013, p. 53); Cunningham (2004) seemed to concur also suggesting that vicarious traumatization can have a cumulative effect (p. 306). Howlett and Collins (2014) went further to suggest that the nature of this cumulative effect is significant (p. 181). If the social worker's schema is affected, one may observe a disruption in the lens through which the social worker sees the world (Dane & Chachkes, 2001, p. 35). This involves the social worker's basic assumptions about the world (Howlett & Collins, 2014, p. 181; Levin & Greisberg, 2003, p. 246). Trippany, Kress, and Wilcoxon (2004) tended to summarize the assumption suggesting that continuous exposures of the social worker to a client's traumatic material can cause a shift in the way the social worker "perceives themselves, others, and the world" (p. 31).

Naturale (2007) suggested that the social worker may experience a shift in cognitive states (p. 174). This is where a cognitive schema disruption can possibly center not only on the social worker's belief system, but the memory system as well (Trippany et al., 2004, p. 31). The vicariously traumatized social worker may also experience altered memory systems (Sansburg et al., 2015, p. 115). The social worker, as a human

being, tends to construct personal realities to interpret events (Dane & Chachkes, 2001, p. 34. These personal realities can be seen as a model of self-to-world allowing the social worker to make this reality comprehensible, meaningful, and manageable (Dane & Chachkes, 2001, pp. 34-35).

It was suggested that when the social worker empathizes with a client who is experiencing trauma, that social worker goes into the world of that client. And, in doing this, the social worker may experience consequences like emotional contagion and vicarious traumatization (Howlett & Collins, 2014, p. 181). My review of the literature further showed that the transformative process of vicarious traumatization can not only shift (Naturale, 2007, p.174), but permanently change the social worker's cognitive systems (vann Minnen & Keijsers, 2000), and worldviews (Clemans, 2005, p. 53). The social worker who is vicariously traumatized may begin to view the world in a negative manner (Sansbury et al., 2015, p. 115), or may begin to feel unsafe (Miner et al., 2005, p. 115; Newell & MacNeil, 2010, p. 60). Dane and Chachkes (2001) proposed this interference can cause an alteration in the way the social worker perceives the world and how things should happen (p. 35).

A review of the literature showed that there may be a variety of responses that represent characteristics of vicarious traumatization (Miner et al., 2005, p. 115).

- There may be a transformation in identity for the social worker with vicarious traumatization.
- Levin and Greisberg (2003) suggested that there may be interference with the social worker's imagery system (p. 246).

- Overtime, this could impact the social worker's personal and social identity (Dane & Chachkes, 2001, p. 33).

- There appeared to be an agreement by several scholars that there could be significant interference in the social worker's sense of meaning, connection, identity, and worldview (Craig & Sprang, 2010, p. 320; Kadambi & Truscott, 2003; van Minnen & Keijsers, 2000, p. 150).

- There could also be an increase in defensiveness (Sansbury et al., 2015, p. 115).

- There may be a reduced sense of self (Miner et al., 2005, p. 115).

- There may be interpersonal transformations in emotions like feeling depressed or powerless (Dombo & Gray, 2013, p. 91).

- There may be cognitive distortions surrounding competence (p. 91).

Vicarious traumatization was theorized as having a "cumulative, transformative effect" (Devilly et al., 2009, p. 374) on the social worker, and referred to as an "actual transformation of the social worker's inner experience resulting from empathetic engagement" (Dane & Chachkes, 2001, p. 34) with the clients who are traumatized. Trippany et al. (2004) suggested that the term vicarious traumatization has been conceptualized as being intensified by, and embedded in, the open engagement of empathy (p. 31). King and Holoako (2012) suggested "empathy is a core principle of social work" (p. 174). However, it had been suggested that there had been "minimal research has been undertaken by social work researchers" (p. 174) regarding this phenomenon.

The history of vicarious traumatization showed that McCann and Pearlman (1990) have been credited for the introduction of the concept of vicarious traumatization (Dane & Chachkes, 2001; Kadambi & Truscott, 2003; vann Minnen & Keijsers, 2000), which also appeared to be closely associated with the concept of compassion fatigue (Naturale, 2007, p. 174). However, Sansbury et al. (2015) suggested that "compassion fatigue differs from vicarious traumatization in that compassion fatigue can occur with little or no contact with clients, while vicarious traumatization only occurs when interacting with traumatized clients" (p. 115). Cunningham (2004) suggested that the concept of vicarious traumatization evolved from the empirical study of secondary trauma or compassion fatigue among disaster workers, fire fighters, and family members of individuals who were traumatized (p. 306).

Self-Care Agency: The Independent Variable

Both Gatlin (2014) and Kanter (2007) proposed that the social worker who is exposed to the trauma of clients may neglect their self-care (p. 5), although a review of the literature suggested that self-care could combat compassion fatigue and could enhance compassion satisfaction in the social worker. And, when highlighting the importance of the variable of self-care, Cox and Steiner (2013) reported that the need for self-care is now becoming more widely recognized in the social worker profession (p. 52). It was also put forth that there is a Code of Ethics for the profession highlighting that the social worker should maintain a solid commitment to both the client and the employer, which includes self-care. Moreover, Goncher et al. (2013) proposed that self-

care is an "ethical imperative" (p. 54); and that self-care is a core foundational and functional competency in professional practice (p. 54).

Pooler (2011) put forth that "self-care undergirds professional flourishing" (p. 441); that "professional fourishing happens at the intersection of being satisfied with one's job, having a sense of effectiveness at work, and having a healthy balance between work and life" (p. 441). The underlying contention, as proposed by de Jesus Silva et al. (2009) was that every healthcare professional must take care self in order to take care of someone else (p. 693). When one associates the care of self-related practices with health encouragement, it was emphasized that "at the very moment these practices are performed, one will adopt an ethical behavior towards life" (pp. 693-694). The premise put forth the in this study was that self-care actions, a component of self-care agency, was believed to have an effect on compassion stress and the outcomes of compassion satisfaction observed on a continuum of compassion (Figley, 2002; Radey & Figley 2007).

Difficulty Defining Self-Care Agency

Godfrey et al. (2011) examined the diversity of the definitions of self-care and found that the definitions tended to vary as to "who engages in self-care behavior; what motivates self-care behavior; and the level at which healthcare professionals are involved" (p. 3). Viewpoints on self-care also tended to vary among healthcare professionals, the public, different disciplines, and the different roles involving healthcare professionals, where it was suggested that different professions tended to view self-care through the lens of their own domain of practice (p. 3). Consequently, researchers are left

with a large variety of explanations and descriptions of self-care (p. 4) which tend to impact the definition and cause difficulties in research on self-care (p. 3). A limitation put forth here was that defining the concept depends on both the perspective of self-care and discipline of researcher (Godfrey, 2010, p. 167).

Orem (1985) put forth that "self-care agency is a human power" (p. 105); but it is not inborn…Activities of self-care must be learned (p. 108); and this learning requires the use of knowledge, "enduring motivation, and skill" (p. 109); where the individual gradually develops a repertoire of self-practices and related skills (p. 109). There is a theory that self-care is a human regulatory force, that the social worker's self-care abilities identify the necessities and the care that regulate vital processes, and that self-care contributes to the social worker's well-being (de Jesus Silva et al., 2009, p. 692). Mineko (1998) posited that "self-care practices are directed toward the maintenance and promotion of health" (p. 370). Carroll (1995) posited that "the ability to perform self-care activities is affected by the development of the [social worker] as a self-care agent" (p. 51). Gatlin (2014) defined self-care as "the ability to engage in self-care; and [that] certain factors can condition or effect an individual's ability to engage in self-care (p. 5). And, Nahcivan (2004) proposed that the ability to engage in self-care is called self-care agency, and within the self-care/self-care deficit theory are the constructs of self-care and self-care agency which were the focus of this study.

Orem's Self-Care Deficit Model Applied to the Psychology of Compassion

When reading the work of Orem (2001) one was cautioned that

> If one is going to get anyplace in developing a science, one has to have a model of
>
> practice science… One has to have a valid, reliable, general theory and integrate
>
> the conceptual elements of the theory with the practice operations. (p. 35).

That was the intent of this study. And, one of the models chosen for this study was based

on the self-care/self-care deficit nursing theory model. The self-care/self-care deficit

nursing theory principles developed by Orem (1980) (Sousa, 2002) guided the

examination of the relationship between self-care and compassion satisfaction in this

study.

A review of the literature showed that the concepts of self-care deficit and self-

care agency were first developed by Orem. And, over the last three decades, one can

observe the expansion of the construct where the theories of self-care and self-care

agency have been used frequently to advance the nursing field in the areas of research,

education, and practice (Sousa, 2002, p. 2). Edwards (1997) proposed that Orem's (1995)

model consists of three major theories: the theory of self-care, the theory of self-care

deficit, and the theory of nursing systems (p. 15). Orem reported that "early on, my

colleagues in the Nursing Development Conference Group (1973, 1979) and I identified

some foundational knowledge that is needed to reason correctly about nursing matters"

(Orem, 2001, p. 36).

Orem was the major theorist who approached nursing though the concept of self-

care (Edwards, 1997, p. 18). A review of the literature showed that Orem began

developing her foundations the self-care deficit theory in the 1950s (Fawcett, 2001), and

the theory was refined and has evolved, as was evidenced in the five editions of Orem's

book, *Nursing: Concepts of Practice* (Orem, 1971, 1980, 1985, 1991, 1995) (p. 35). By the 1970s, "all of the conceptual elements of the self-care deficit theory of nursing were formalized and validated as static concepts" (Fawcett, 2001, p. 35).

An understanding of self-care agency, as it relates to the psychology of compassion, could also advance the field of social work practice; and it was proposed that the structure of Orem's model lends itself to expansion to other professional fields, like social work. I proposed that, just as the compassion satisfaction/compassion fatigue models could be used across disciplines, the self-care/self-care deficit model, incorporating self-care agency, could also be used across disciplines. Additionally, Comptom (1989) suggested that "borrowed knowledge from other disciplines must be synthesized into conceptual systems" (p. 22). I believed that a synthesis of the self-care/self-care deficit model developed by Orem does tended to communicate and address a major concern of the compassion fatigue model developed by Figley (2002) and the compassion satisfaction/compassion fatigue model developed Stamm (2002).

A review of the literature showed that attaining compassion satisfaction could be realized through by the infusion of the element of self-care into personal behavior (Radey & Figley, 2007), where increased personal agency can have a positive effect on the social worker's interaction with clients (Pack, 2009). Pack (2009) suggested that being aware of one's own self, as well as one's self in relation to others, is important when interacting with clients who have been traumatized; and that the individual giving care should be familiar with strategies, and how to access them in the workplace and in their everyday life (p.4). Orem (1985) proposed

- When self-care measures are "executed daily they tend to become integrated into the fabric of daily living" (p. 109) which includes the work environment.

- The social worker must have an "openness to self and the environment and know and validate self-care" (p. 109);

- "Practices are prerequisites for learning as well as engagement in continuous and effective self-care" (p. 109).

- The social worker "who can produce effective self-care has knowledge of onesself and of environmental conditions, and has confirmed what is appropriate to do under the circumstances" (p.119).

- Before the social worker can confirm the appropriate thing to do, this individual must have to gain antecedent knowledge of the courses of action open to them, and the effectiveness and desirability of these courses of action (p. 119).

In this study I proposed that enhancing compassion satisfaction through the use of an informational module could show any change that had been integrated into the work environment after the introduction of the module and effective self-care agency tools.

Self-Care Agency

Self-Care agency (a) is perceived as "a complex, acquired capability for action that is activated in the performance of operations of self-care" (McBride, 1987, p. 6; Nahcivan, 2004). Self-care (b) is the deliberate actions of self-care that are undertaken in order to meet demands that arise out of the need for care (p. 8). It is (c) the power of the individual to engage in operations essential for self-care (p. 6), where self-care can be

conceptualized as an 'action repertoire' of the individual (McBride, 1987, p. 6). The action repertoire was the target variable in this study. Self-Care agency is "an individual's capabilities for self-care actions to achieve a goal-oriented outcome" (Sousa, 2002, p. 2), where self-care agency is considered a condition where "the human being initiates and sustains self-care" (p. 3). Particular to this study were the constructs related to the social worker's self-care abilities, self-care responsibilities, and self-care esteem (Mineko, 1998). It was a premise of this study that if the social worker exercised self-care agency, he or she performed self-care actions which could lead to the achievement of the goal-oriented outcome (Sousa, 2002, p. 3), like compassion satisfaction. Orem (1985) suggested that

> Providers of self-care require two kinds of knowledge. They require empirical knowledge of events and observations, attaching meaning to their observations, and correlating the meaning of event and conditions with possible courses of action- (p. 119)…Individuals must have some understanding of the meaning and value of self-care to make rational and reasonable self-care judgments and decisions (p. 120)…This provides the basis for apprasing and attaching value to engaging in particular courses of action (p. 120)… Self-Care agency can be identified as present when it is developed or is developing. (p. 123)

A justification for this study came from Sousa (2002) who relayed that

> There have only been a small number of studies that have examined the relationship between self-care agency and outcome… [where] self-care actions are mediators between self-care agency and goal-oriented outcomes, [suggesting]

that if [the social worker] exercises self-care agency, he or she performs self-care

actions which would lead to the achievement of a desired outcome. (p. 3)

It was proposed that self-care agency relates to the social worker's ability to recognize his

or her own needs, to evaluate personal and environmental resources, and to determine

and perform self-care actions to achieve a desired goal (Sousa, 2002, p. 3). For this study

the goal-oriented outcome was compassion satisfaction, with additional outcome

variables of secondary traumatic stress and burnout were also examined.

It seemed that McBride's (2002) interpreted Orem's (1985) self-care deficit

model to relay that self-care agency involves "the practice of activities that the individual

initiates on their own behalf to maintain life and health" (p. 311). And to do so, McBride

(1987) proposed that "one must have the necessary knowledge, skill, and motivation: that

is, self-agency" (p. 311). Godfrey et. al (2011) suggested that self-care actions are based

on the social worker's knowledge and experience (p. 6). And "an inability to meet the

demand constitutes a self-care deficit" (McBride, 1987, p. 311). Edwards (1997) tended

to agree suggesting that "if self-care agency is not adequate to meet demands, a self-care

deficit exists which requires …intervention" (p. 15). In this study, self-initiated

participation in the informational, with knowledge and skills related to trauma work and

care, targeted the social worker participant's current repertoire.

Importantly, self-care agency does require that the individual has a need or desire

to perform self-care actions to achieve a desired goal or outcome like compassion

satisfaction (Sousa, 2002); and the work of Gilbert (2007) suggested that before the social

worker performs the actions, where these self-care actions could act as a moderator, one

must first provide evidence to the social worker that the consequences are meaningful (p. 257). The exercise of self-care agency also involves the social worker's "capabilities to recognize personal needs, to self-evaluate, and to perform appropriate" (Sousa, 2002, p. 2) self-care actions. Before entering this study I sought to introduce the participant to a purpose for the module that related directly to the social work profession.

Concluding this idea

> McBride proposed that when one references capabilities regarding an individual's power of agency, it is in reference to (a) ability to reason, (b) motivation, (c) ability to make decisions and operationalize them, (d) ability to acquire, retain, and operationalize knowledge, (e) repertoire of cognition, perceptual, manipulative communicative and interpersonal skills, (f) ability to order self-care actions, and (g) the ability to internalize behaviors. (p. 311)

Accepting the invitation to participate in the study showed self-initiation toward a desired goal or outcome.

Deliberate Actions Within the Theory of Self-Care/Self-Care Deficit

Orem (1985) proposed that

- Understanding self-care as deliberate actions with external and internal orientations is important" (p. 110).

- Deliberate action is defined as "purposive goal–or result seeking activity" (p. 115).

- It is suggested that if the social worker approaches care with a background of specific knowledge, this individual may see results like integrated functioning (p. 115).

- Deliberate action is essentially "action to achieve a foreseen result that is proceeded by investigation, reflection, and judgment to appraise the situation and thoughtful, deliberate choice of what should be done" (p. 115).

- Deliberate action "is based on informed judgment about the outcomes being sought from acting a particular way" (p. 115).

With the use of the informational module, the goal was to provide the specific background and repertoire building information, and skills tailored to trauma tools that could be integrated into the practice of the social worker.

Understanding the Sequence of Deliberate Actions

This study targeted the deliberate actions of self-care and the social worker. Sousa (2002) proposed that self-care agency requires a need or desire to perfom self-care actions to achieve a desired goal or outcome. McBride (1987) proposed that self-care consists of "deliberate actions taken to achieve a foreseen result, [and] these deliberate actions are preceded by investigation, reflection, and judgment to appraise the situation, and by a thoughtful, deliberate choice of what should be done" (p. 9). Orem's (1985) model and phases one and two of the schema focus on antecedent knowledge, suggest that "deliberate action proceeds step by step toward the achievement of some state that differs in one or more respects from the situation that existed when the action was begun" (p. 117). Deliberate actions, including self-care, can be described as having two phases:

(1) "operations preceding and leading up to decisions about what is to be done and for what purpose, and (2) operations subsequent to these decisions for engaging in a selected course of action" (p. 117). It was proposed that the social worker participant already possesses a knowledge of him/herself and the environment under study, which could be thought of as a type of empirical knowledge; and it was proposed that the social workers has some antecedent knowledge allowing this individual to establish the appropriate action to take. However, this study focused on (1) enhancing the antecedent knowledge of the social worker through an informational module (2) and focusing on enhancing the repertoire through motivating operations. By targeting the repertoire of the social worker participants, I proposed that this action would assist the social worker in making judgments and decision-making concerning self-care, which tended to be supported by Orem (1985) where deliberate action is always self-initiated, self-directed, and controlled in regards to presenting conditions and circumstances (p. 116).

Self-Care actions acted as a moderator between self-care agency and compassion satisfaction in this study. I proposed that self-care actions should be carried out to meet the demands stemming from the needs of the social worker in the work environment. Based on self-care actions, the social worker could self-monitor the effects of the actions and make decisions as to whether to continue the action or change the mode of action (Orem, 1985). McBride (1987) sumed up this structure with the proposal that self-care action, therefore, "subsumes (a) a knowledge of appropriate health behavior; (b) judgment and decision-making ability that is influenced by values; (c) an ability to take

action; (d) and an ability to monitor the effects of action and to take the initiative to change action when necessary" (p. 10).

Gatlin (2014) tended to support this structure also suggesting that the development of the concept of self-care agency is based on the assumption that "self-care agency is the power or ability of the individual to engage in estimative, transitional, and productive operations of self-care" (p. 5). Strengthening the proposed structure, Nahcivan (2004) also proposed that, in order for one to engage in …self-care actions, or any deliberate actions, the individual must have general or foundational capabilities (p. 5). And, particular to this study was the general or foundational capability surrounding motivation (p. 5) and self-motivation.

Motivating or Establishing Operations

A motivating operation, also known as an establishing operation in this study, is "any environmental variable that (a) alters (increases) the reinforcing effectiveness of some stimulus, object, or event, and (b) alters (increases) the current frequency of all behavior that has been reinforced by that stimulus, object, or event" (Cooper et al., 2007, p. 375), or one that produces an evocative effect (p. 375). The theory of motivating operations was chosen for this study and was anchored in the work of Sousa (2002) who proposed that self-care agency requires a need or desire to perfom self-care actions to achieve a desired goal or outcome (p. 2), like compassion satisfaction; that the exercise of self-care agency involves the social worker's "capabilities to recognize personal needs, to self-evaluate, and to perform appropriate" (p. 2) self-care actions; an McBride (1987)

who proposed that "the exercise of self-care agency results in a system of actions directed to 'reality conditions' in self or environment in order to regulate them" (p. 6). When considering the repertoire of an individual, Cooper et al. (2007) suggested that the social worker's repertoire contains a collection of knowledge and skills that this individual has learned that are relevant to particular settings (p. 27), like the job setting of tasks performed with the inclusion of self-care actions. I suggested that in using a bottom-up rather than a top-down approach to learning, this study sought to enhance the social worker's repertoire, or produce a repertoire-altering conditions based on Michael (2007) and his theories of motivating operations and theories surrounding repertoire-altering effects. Michael (2007) postulated that

> As a result of an environmental history, [the social worker] has an operant repertoire of motivating operations, discriminative stimulus, and response relations (p. 377). Also present is a respondent repertoire of stimuli capable of eliciting responses… [and] motivating operations and discriminative stimuli are components of the existing repertoire. They are the antecedent variables that have behavior-altering effects (p. 377). Antecedent events can evoke…responses, but by their simple occurrence does not alter the [individual's] operant repertoire of functional relations …Antecedent variables [self-care actions] are in contrast to consequence variables [compassion satisfaction], whose main effect is to change the organism's repertoire of functional relations so that the [social worker] behaves differently in the future. Consequent variables include reinforcers. That is what is meant when motivating operations and discriminant stimuli are said to

alter the current frequency of all behavior relevant to the motivating

operations…but reinforcers without consequences alter the future frequency of

whatever behavior immediately preceded those consequences. (p. 377)

In précis of this theory, it was proposed that the self-care actions utilized in this

informational module can have a repertoire altering effect, which may in turn have both a

behavior-altering and a value-altering effect through providing knowledge, introducing

self-care skills, providing knowledge of the health values of self-care and the need for

persistence, and of having a purposeful goal (Sousa, 2002, p. 2). The aim was to enhance

the personal capabilities of the social worker where this worker would recognize

"personal and environmental conditions that are significant" (p. 2) that involve the social

worker's action, judgment and decision-making about what that social worker "can,

should, and actually does do" (p. 2) and the actual performance of self-care actions (p. 2).

Importantly, Sousa (2002) further proposed that "any disturbance in one of [the]

capabilities affects the [social worker's] deliberate actions (p. 2). It was a premise of this

study that by targeting and enhancing the social worker's repertoire, this individual may

also realize both a behavior-altering and value-altering effect related to self-agency and

compassion satisfaction when given an opportunity to apply the knowledge to real-world

experiences. And, for the purpose of this study the motivation operations can be

portrayed as both an antecedent variable and an operant.

Personal and Environmental Factors Affecting Self-Care Agency

While McBride (1987) proposed that "self-care agency results in a system of

actions directed to 'reality conditions' in self or environment in order to regulate them"

(p. 6), Sousa (2002) proposed that there are ten basic conditioning factors that influence self-care agency, including personal and environmental factors (p. 2). The assumption was that basic conditioning factors could be envisioned as factors that are both internal and external in nature. Gatlin (2014) suggested that the relationship between the basic conditioning factors and self-care agency included the premise that the social worker's ability to engage in self-care can be conditioned by available resources (p. 6); or that environmental factors and resource availability, conditioning factors, may interact with one another to condition self-care agency (p. 5). And, of particular interest to this study were theories and principles surrounding the personal conditioning and environmental factors (p. 2). These principles helped guide the choice of the informational module strategy used in this study. It was also proposed that the concept of self-care agency has "three personal trait characteristics: foundational, enabling, and operational" (Gatlin, 2014; Nahcivan, 2004; Sousa 2002); and Nahcivan (2004) proposed that these are hierarchial abilities (p. 5).

The foundational capabilities of self-care agency surround the social worker's sensations, attention, memory, perception, and orientation (Nahcivan, 2004, p. 5); where alterations in the foundational capabilitites can directly affect the higher order capabilities of self-care agency, such as the ability to learn and other qualities that are necessary for the social woker to have the ability to reason, and make judgments and decisions for any deliberate actions (Nahcivan, 2004, p. 5). I suggested that the licensed social worker participant in this study possessed many of these foundational capabilities: the licensed

professional social worker participants this study is required to pass an examination, and achieve a certain level of proficiency on that exam, to be included on this roster.

Building on the proposal that the concept of self-care agency has "three personal trait characteristics: foundational, enabling, and operational" (Sousa, 2002, p. 2), these characteristics were be targeted in the informational module. I agreed with the proposal that, (a) by targeting the enabling and operational traits, the foundational traits "regarding the perception of self-care, the social worker's deliberate actions" (Sousa, 2002, p. 2) could also be strengthened. With the enabling trait and building on the theories of Sousa, I proposed that the informational module would enhance the social worker's personal capabilities to engage in self-care by (a) providing knowledge, (b) an introduction to self-care skills, (c) providing knowledge of the health values of self-care, (d) the need for persistence, and (e) of having a purposeful goal (Sousa, 2002, p. 2). This involved the social worker's action, judgment, and decision-making about what that social worker "can, should, and actually does do" (p. 2) and the actual performance of self-care actions (p. 2). Sousa (2002) further proposed that "any disturbance in one of [these] capabilities affects the social worker's deliberate actions" (p. 2). And, pertaining to operational traits, the aim of the informational module was to enhance the personal capabilities of the social worker where this worker would recognize personal and environmental conditions that were significant (p. 2).

Self-Care Behavior/Self-Care Actions and Operant Conditioning

In reference to the theory that self-care is learned behavior, Edwards (1997) proposed that "the theory of self-care states that self-care is a learned behavior that

purposely regulates human structural wholeness, functioning, and human development"

(p. 15); and when focusing on the concept analysis of self-care, Godfrey (2010)

suggested that, within the context of self-care, it was proposed that the social worker's

has the "ability to learn self-care behaviors (psychological factors, cognitive skills,

physical and emotional factors)" (p. 167) where consequent behavior could be enhanced -

well-being and functionality (p. 167) or compassion satisfaction.

Defining self-care as operant behavior allowed me to address the question: For the

social worker participating in the informational module, how does the infusion of

knowledge about the theories of compassion and trauma and its relation to self-care

actions affect the outcome of compassion in the participants? It was an assumption of this

study that techniques of applied behavior analysis could be used to identify the variables

responsible for a behavior change that was measurable (Cooper et al., 2007, p. 23)

through the processes associated with operant conditioning.

I assumed that self-care behavior is learned behavior; self-care is operant

behavior; operant behavior is modifiable by its consequences; and the outcome of self-

care could affect the variance on a continuum of compassion in the direction of

compassion satisfaction, producing a change in behavior that is observable in a

moderation regression design format. I further assumed that operant behaviors could take

a wide range of forms (Cooper et al., 2007, p. 32). Cooper et al. suggested that "operant

behavior is initiated and controlled by will, and it is defined as activity this is shaped and

maintained by its consequences" (p. 31). Through operant conditioning, one may notice

the "positive consequences of engaging in self-care [actions] include the achievement of

desired outcomes" (Godfrey, 2010, p. 159) like compassion satisfaction, where one could

notice an increased sense of satisfaction, increased sense of responsibility, control,

independence, and autonomy (p. 159). It was an assumption of this study that operant

conditioning could strengthen the operant where the response would be more probable

and more frequent (Cooper et al., 2007, p. 34); that if operant conditioning had taken

place, one would observe an increase in frequency, suggesting that reinforcement had

taken place (p. 34). This led to the proposal that the individual, as a whole, tended to

favor situations that evoke pleasant feelings (Overskeid, 2000, p. 362) which included

compassion satisfaction.

The Exercise of Self-Care Agency Scale

As discussed in Chapter 1, the construct of the exercise of self-care agency was

examined in this study through the Exercise of Self-Care Agency Scale. The Exercise of

Self-Care Agency Scale is based on Orem and was developed by Kearney and Fleischer

(1979). In establishing the content validity of the Exercise of Self-Care Agency Scale,

these researchers used five nursing students who had expertise in the area of the self-care

concept, and to establish construct validity, the researchers used " The Adjective Check

List (Gough & Heilburn, 1965) and Rogger's Internal-External Locus of Control and

Reinforcement Scale (Rotter, 1966) " (p. 25). The participants in the development of this

instrument were 84 nursing students pursuing associate degrees and 153 students

pursuing psychology degrees (Kearney & Fleischer, 1979). In developing the instrument,

these researchers had a test-retest reliability of .77 for the nursing students, split-half

reliabilities were .80 and .81 in the first and second testing of the nursing students, and .77 for the psychology students (Kearney & Fleischer, 1979, p. 25).

The scale brings in the social worker's self-care abilities, self-care responsibilities, and self-care esteem (Mineko, 1998), but it primarily focused on four subconstructs or factors of self-care agency that were examined that pertained to an social worker's ability to engage in self-care activities: (a) the social worker's motivation, (b) an active versus a passive response to situations; (c) the knowledge base of the social worker; and (d) the social worker's sense of self-worth (Kearney & Fleischer, 1979, pp. 26-27; Riesch & Hauch, 1988, p. 245). The reliability and validity of this scale were discussed in Chapter 1.

McBride (1987) measured the reliability and construct validity of the Exercise of Self-Care Agency Scale with two groups of participants: 62 basic nursing students seeking associate degrees and 57 adult diabetic patients. The Self-Directed Learning Readiness Scale Guglielmino (1977) was used to test the scale's construct validity. This researcher found that the Exercise of Self-Care Agency Scale was significantly correlated with all eight factors of the Self-Directed Learning Readiness Scale Guglielmino (1977). Of particular inerest for this study was the measures for the basic nursing students. The construct validity was r =.76; the split-half reliability was .74; and the test retest reliability was .76.

The Informational Module

This study used the *Tools for Trauma: A CBT Approach* informational module as the as the moderating variable. This course was administered through an agreement with the

Traumatology Institute's website directed by Dr. Baranowsky. The module, *Tools for Trauma: A Cognitive Behavioral Therapy (CBT) Approach,* designed by Baranowsky and Eric Gentry in 2010, is an online, self-paced program that the participants were granted access to through an agreement with the director. This predesigned, online four-session module focused on knowledge, skills, principles, and techniques of cognitive behavioral therapy (CBT) that the professional social workers could integrated into their work with survivors of trauma (Gentry et al., 1997; Traumatology Institute, 2012, p. 1). It was "created with the compassionate professional in mind" (p. 1). It is proposed that these skills and techniques could enhance the professional social workers' repertoire with a specific knowledge in the area of trauma (p. 1). Goals of module include helping the participant to:

- Be able to utilize CBT techniques to assist trauma survivors and themselves in developing more satisfying lifestyles in the present.

- Recognize and employ resources and plan for prevention and resiliency.

- Add resolution exercises to the repertoire. (Traumatology Institute, 2012, p. 1).

Theories on How Learning will take Place

Continuing with the idea of "borrowed knowledge from other disciplines" (Comptom, 1989, p. 22), theories from applied research were considered is this study where I was looking through the lens of applied behavior analysis, and specifically motivating operations as discussed by Michael (2007). The basic theoretical framework of the informational module came from the works of Baer, Wolf, and Risley (1987) and Cooper et al. (2007). Baer is considered one of the founders of applied behavior analysis,

and, along with colleagues Wolf and Risley, produced dimensions for evaluating

interventions which are still being used today in the form a tasklist that is structured to

help guide research studies. More than 40 years ago, Baer, Wolf, and Risley (1987) first

published the seminal work where they proposed seven dimensions or guides to serve as

the primary criteria for defining and judging the value of applied behavior analysis (p.

91). Baer et al. (1987) proposed that:

- Applied research is constrained to look at variables which can be effective in

  improving the behavior under study (p. 91).

- Applied research is constrained to examining behaviors which are socially

  important (p. 91).

Cooper et al. (2007) proposed that:

- Applied behavior analysis is committeed to enhancing and improving the lives of

  the population (p. 16).

- To meet this criterion, a researcher or practitioner "must select behaviors to

  change that are socially significant for participants [including] …self-

  care…behaviors that improve the day-to-day life experience of the participants"

  (p. 16).

   Efficient learning. Within the framework of applied behavior analysis there is the

principle of efficient learning. Using this framework, I agreed with the proposal that there

are three basic stages to efficient learning: inductive, theory, and skill. (a) In the inductive

stage, the idea was that the social worker could be taught the consequences of performing

self-care behavior including the importance of the knowledge and skills, and the

difference it could potentially make to perform these skills well or poorly (Gilbert, 2007, p. 268). (b) In the theory stage, I suggested that the social worker could be taught those generalizations that help moderate the desired performance which includes the concepts, or performance theory necessary for the individual to reason how to respond (p. 268); and (c) in the skill stage, the individual could be taught discriminations required for performance of any skills not yet mastered (p. 268).

The knowledge progression of the informational module. In knowledge progression, (1) the first objective was to teach the social worker to discriminate the consequences of the behavior (Gilbert, 2007, p. 266) where the social worker was directed to training and given the means to know the consequences. (2) This, in turn, established the feedback needed to inform the social worker that performance was correctly done (p. 266). Next, (3) the social worker was taught to discriminate the occasion for responding successfully (Gilbert, 2007, p. 266). This is known as the discriminative or skill stage training (p. 266). However, the right occasion for responding could occur in many forms; therefore, the social worker must develop the generalizations (concepts) required to interpret it (p. 267).

Theories that Support an Informational Module

In this study I was seeking a variable, in this case self-care actions, which would facilitate the association between the self-care agency and compassion satisfaction. In theories affiliated with applied behavior analysis it was proposed that:

- Behavior can be elicied by its consequences (Cooper et al., 2007, p. 33).

- Operant behavior is "any behavior whose future frequency is determined primarily by its history of consequences" (Cooper et al., 2007, p. 31).

- Operant behavior is "selected, shaped, and maintained by the consequences that have followed in the past" (Cooper et al., 2007, p. 31).

- Operants are defined functionally, which is by their effects (Cooper et al., 2007, p. 32).

- In operant conditioning, the aim is "to strengthen an operant by making a response more probable or more frequent" (Cooper et al., 2007, p. 34).

- There was the theory that when operant conditioning consists of an increase in response frequency, there was an implication that reinforcement had taken place (Cooper et al., 2007, p. 34).

- A"behavioral consequence affects the relative frequency with which similar responses will be emitted in the future under similar conditions" (Cooper et al., 2007, p. 34).

- The possibility exists that the social worker could learn through operant conditioning requiring two separate physiological mechanisms; (a) one that mediates feelings and another that mediates the reinforcing effects of stimuli (Overskeid, 2000).

The Guiding Theories of the Informational Module

A rationale for this informational module, *Tools for Trauma: A Cognitive Behavioral Therapy (CBT) Approach*, came from Sprang, et al. (2007) who found that therapists with specialized training in trauma work had higher levels of compassion

satisfaction than non-specialists (p. 259). Therefore, this study proposed (a) the infusion of self-care education and trauma education for the social worker currently on the job (Bride & Figley, 2007) in the form of an informational module. I suggested that the informational module, as part of in-service training, could promote positive social change for the individual, the organization, and the client.

It was proposed that those social workers on the frontlines, or those who come into direct contact with traumatized clients, need to focus on self-care (Bride & Figley, 2007). Bride and Figley (2007) relayed the importance of the social worker implementing self-help skills when this individual becomes aware of his or her own risk of secondary trauma. It was believed that this informational module would enhance the social worker's personal capabilities to engage in self-care by providing knowledge and an introduction to self-care skills. It provided knowledge of the health values of self-care, the need for persistence, and of having a purposeful goal (Sousa, 2002, p. 2).

This study also examined the moderating role of a variable - self-care agency in the form of self-care actions. A mediating role of self-care was examined in recent literature. Goncher et al. (2013) conducted a correlational non-experimental study to examine the mediational role of self-care utilization with 262 doctoral level clinical psychology students and quality of life. This study supported the contention that self-care should be paramount to both the trainee and the practicing psychologist.

In an article by Newell and Nelson-Cardell (2014) it was suggested that students trainees are particularly vulnerable to professional burnout, secondary traumatic stress, and compassion fatigue as they enter into field placement due to their lack of professional

experience. Their article proposed incorporating of material on professional self-care into both micro and macro course offerings. A review of the literature proposed that in order for the social worker to attain compassion satisfaction, that this individual must infuse the element of self-care into personal behavior (Radey & Figley, 2007); that increased personal agency can have a positive effect on the social worker's interaction with clients (Pack, 2009). Another study that examined a mediating variable was a study by Ding et al. (2014) with 1,243 participants (p. 1) where it was determined that burnout did act as a mediator with the variables under study on anxiety symptoms and occupational stress, and the study of Ben-Porat and Itzhaky (2014) examined a variable that could moderate burnout.

The Moderation Regression Design

In this study, I began with the idea of simple regression analysis proposing that there was a linear relationship between self-care agency and compassion satisfaction. It was found that the variable of self-care agency had four divisions: (a) the social worker's motivation; (b) an active versus a passive response to situations; (c) the knowledge base of the social worker; and (d) the social worker's sense of self-worth, which introduces multiple regression into the analysis. Next, I examined self-care actions as a moderator between self-care agency and compassion satisfaction which introduced a moderation regression design.

Self-Care agency and compassion were considered continuous variables and were be analyzed as such. The interaction effect of interest in this study located in the moderating effects of a dichotomous predictor. And, to examine this contention, I first

looked at a two-way interaction and then a three-way interaction, seeking to make a case for each. I hypothesized that the impact of self-care agency would be greater as self-care actions increased where the focal predictor was self-care agency and its divisions. By partialing out each division of self-care agency, I had an interactive model with four quantitative/continuous predictors of self-care agency, with the moderating variable of self-care actions considered a fifth dichotomous predictor. I believed that this was the appropriate design for this study as explained and demonstrated in Chapter 3 and Chapter 4.

Understanding the Concepts in the Moderation Regression Design

The research design and analysis were guided by the discussions of Hayes. Following the direction of Hayes (2013), I used moderation analysis to examine "… 'how' the effect of the antecedent variable of [self-care agency] (X) on a consequent variable of [compassion satisfaction] (Y) 'depends' on a third variable of [self-care actions] (M)" (Hayes, 2013, p. 10). Several theories guided this study: the self-care/self-care deficit theory put forth by Orem (1985) guided the independent variable of self-care agency; compassion satisfaction, a component of the compassion satisfaction/compassion fatigue theory of Stamm (2010) guided the dependent variable; and the motivating operations theory, a theory put forth by Michael (2007), guided self-care actions that functioned as the moderating variable of self-care actions as seen in the informational module, *Tools for Trauma: A CBT Approach*. To test the hypotheses put forth in this study, I used the moderation regression design.

Hayes (2013) relayed that:

When an investigator seeks to determine whether a certain variable influences or
is related to the size of one variable's effect on another, a moderation analysis is
the proper analytical strategy…moderation is (also known as interaction) using
linear regression analysis (p. 207)… In regression, the null hypothesis is most
typically tested when estimating Y from X using linear regression [proposing that]
X and Y are linearly uncorrelated in the population" (p. 46) … [and that]
hypotheses about moderation can be tested in several ways, the most common of
which is to include the product of X and M in the model of Y along with X and M.
This allows X's effect on Y to depend linearly on M. If such a dependency is
established, it is no longer sensible to talk about X's effect on Y without
conditioning that discussion on M. (p. 244)

This study hypothesized that self-care actions and self-care agency interact in
their influence on compassion satisfaction; that identifying self-care actions' effect "helps
to establish boundary conditions of an effect …large versus small, persent versus absent,
positive versus negative, and so forth" (Hayes, 2013, p. 208); that self-care actions is said
to be a moderator of self-care agency's effect on compassion satisfaction (p. 208); and
the effect of self-care agency on compassion satisfaction is moderated by self-care
actions "if its size, sign, or strength depends on, or can be predicted by, self-care actions"
(p. 208).

Rationale for the Covariates

The measurement instruments used in this study are considered validated
questionnaires. And, important to this study was the constraint that if the questionnaire

has subscales or subfactors, alpha should be applied separately to these subscales (Field, 2013, p. 709), allowing me to treat each division as a predictor variables, or a focal predictor. This was the rationale for the use of the multiple predictors, or covariates, that stemmed from the single variable of self-care agency, and each division of self-care agency was used separately as a focal predictor or independent variable.

The independent variable, or predictor variable of self-care agency had four divisions: (a) the social worker's motivation; (b) an active versus a passive response to situations; (c) the knowledge-base of the social worker; and (d) the social worker's sense of self-worth. Self-Care actions, or deliberate actions, acted as the moderation variable (*M*) and also acted as an independent of focal variable for examination. These divisions of the independent variables are components were also termed covariates. And, Darlington and Hayes (2017) proposed that:

> When the covariate is numerical, it may be that no two participants in a study have the same measurement on the covariate and so [one] …cannot construct a table. However, [one] … may want to control many covariates at once. [One would]… need methods for inference about partial relationships such as hypotheses testing procedures and confidence intervals. Linear modeling offers a means of accomplishing this.(p. 8)

Linear Modeling

I began with the possibility of a linear relationship where the presumption was that there was a causal relation where self-care agency (X) caused compassion satisfaction (Y) (Kenny, 2015a). In this moderation regression designed study there was a

focus on linear regression modeling to test the null hypothesis for inference (Hayes, 2013, p. 46). Importantly, Hayes (2013) cautioned that a linear assumption was important to this design because "if violated, this jeapordizes the meaningfulness of the interpretation of the regression coefficient" (p. 53). Hayes (2013) also relayed that "in a simple regression model, the standardized regression coefficient is exactly equal to Pearson's correlation between [self-care agency] *X* and [compassion satisfaction] *Y*" (p. 39). I proposed that the moderator variable of self-care actions could alter the strength of this causal relationship between self-care agency and compassion satisfaction (Kenny, 2015).

Multiple Regression

Hayes (2013) added to the discussion that multiple regression gives a researcher "a means of engaging in a kind of mathematically aided counterfactual reasoning" (p. 69) by estimating 'what' the association between self-care agency (*X)* and compassion satisfaction(*Y*) would be "among a group of people who do not differ on the other variables in the regression model" (p. 69). Hayes relayed that the integrated computer programs SPSS and PROCESS "mathematically equate people who differ on self-care agency (*X)* on those variables (p. 69)…by…partialing out those other variables from the association between self-care agency (*X*) and compassion satisfaction(*Y),* or statistically controlling for those variables" (p. 69). These other variables are the covariates or predictors (p. 69). I was able to measure, calculate, and quantify the partial association "while 'holding constant,' 'statistically controlling for,' or 'partialing out,' a third variable or set of variables" (p. 59). Although I did not have the sample size to effectively

use the PROCESS addin program, I did use the structure suggested by Hayes to examine

the moderating variable of self-care actions.The techniques was used in the data analysis

plan are discussed in Chapter 3.

Statistical Control

I applied statistical controls to the data collected. Darlington and Hayes (2017)

proposed that when covariates are used in a study, a 'statistical control' (p. 4) is an

important statistical tools. When I used statistical control, "no manipulation of the

participants or conditions [was] required, and no data excluded (p. 4). Darlington and

Hayes reported that when a researcher controls for a covariate statistically it signified the

same terms as "to adjust for it , or to correct for it, or to hold constant or to partial out the

covariate" (p. 4). In RQ4 I controlled for the variable of self-care action in the

relationship between the exercise of self-care agency and compassion satisfaction.

Ordinary Least Squares (OLS) Regression/Regression Coefficient

A review of the literature revealed that a moderation regression analysis could

measure the causal relationship between self-care agency (X) and compassion satisfaction

(Y) by using regression coefficients (Kenny, 2015a). And, Hayes (2013) explained that

the regression coefficient for self-care agency (*X*) generated by compassion satisfaction

(*Y*), "quantifies how much two cases that differ by one unit" (p. 53) on self-care agency

(*X*), will be estimated to differ on compassion satisfaction (*Y*) (p. 53).

Looking at Self-Care Actions in a Third Variable Moderator Model

A premise of this study was that self-care was believed to moderate the

compassion stress (Figley, 2002; Radey & Figley 2007) experienced by the social worker

as seen in the outcomes on a continuum of compassion, where Radey and Figley (2007)

defined compassion stress as "the stress connected with exposure to a sufferer" (p. 207).

The theory of self-care actions was also part of the theoretical framework of this study

and could be thought of as the moderating variable or third variable. Baron and Kenny

(1986) explained that conceptual variables may account for the differences in an

individual's behavior (p. 1173) and highlighted the concept of the third variable. An

assumption was made that "the moderator variable always functions as the independent

variable, which partitions a focal independent variable into subgroups that establish its

domains of maximal effectiveness in regard to a given dependent variable" (p. 1173).

Another assumption was that "moderators [can] involve either manipulation or

assessments and either situational or person variables" (Baron & Kenny, 1986, p. 1173).

Milin and Hadžić (2014) defined a moderation variable as "a variable that affects the

relationship between two other variables" (p. 849). (a) The moderator in this study, self-

care actions, was the variable that specifies conditions under which a given predictor was

related to an outcome; (b) the moderator explained when a dependent variable (DV) and

independent variable (IV) were related; and (c) the moderator implied an interaction

effect, where introducing a moderating variable could change the direction or magnitude

of the relationship between two variables (Elite Research, LLC, 2004). The moderating

effect could be (d) enhancing, where increasing the moderator would increase the effect

of the predictor (IV) on the outcome (DV); (e) buffering, where increasing the moderator

would decrease the effect of the predictor on the outcome; or (f) antagonistic, where

increasing the moderator would reverse the effect of the predictor on the outcome (Elite Research, LLC, 2004, p. 1).

Moderation regression analysis was used to assess the effects of the moderating variable. Specifically, this study was be looking at the interaction between self-care agency (*X*) and self-care actions (*M)* and whether or not such an effect was significant in predicting compassion satisfaction (*Y).* In order to confirm that the third variable was making a moderating effect on the relationship between the two variables self-care agency (*X*) and compassion satisfaction(*Y)*, I needed to show that the nature of this relationship changed as the values of the moderating variable self-care actions (*M)* changed. To accomplish this, the study used a moderation regression design on the data. This is done by including an interaction effect in the model and checking to see if such an interaction was significant and explaining if the variation in the response variable was better than before (p. 1). This was observed through the use the pretest – posttest group comparison strategy incorporated in the design.

Ender (2003) proposed that "moderator variables are important because specific factors or variables…are assumed to reduce or enhance the influence that specific independent variables have on specific responses in question: [the] dependent variable" (p. 2). Additionally, Baron and Kenny (1986) explained that

- A moderator is a qualitative … or quantitative variable that affects the direction and/or strength of the relation between the independent, or predictor variable, and the dependent or criterion variable.

- When using a correlational analysis framework, a moderator is a third variable that affects the zero-order correlation between two other variables.

- A moderator effect within a correlational framework may also be said to occur where the direction of the correlation changes.

- The causal relation between two variables change as a function of the moderating variable.

- A key proposition is that the statistical analysis must measure and test the differential effect of the independent variable on the dependent variable as a function of the moderator. (p. 1174)

One interpretation was that I could introduce a moderator variable if there was "an unexpectedly weak or inconsistent relation between a predictor and a criterion variable" (Baron & Kenny, 1986, p. 1178). Here, I proposed that there may be an inconsistent relationship between self-care agency/self-care deficit and the outcomes seen on a continuum of compassion. Further, a review of the literature suggested that in a study, I may begin with a moderator orientation and end up elucidating a mediator process, or begin with a mediator approach and derive moderator-type interventions (p. 1178). With self-care actions acting as the moderator, the social worker were introduced to behaviors that could moderate, or come between, the self-care agency, or a self-care deficit one may be experiencing and the outcome of compassion satisfaction. The assumption was that if the social worker was taught the intermediate or moderating behaviors, or self-care actions, this would assist the social worker in generalizing to a great variety of situations in which he or she must respond. I proposed that this informational module could show

the social worker where things were going, and the consequences of performance

(Gilbert, 2007). Therefore, it was proposed that this informational module would provide

the social worker participant with the moderating generalizations and discrimination

(Gilbert, 2007) needed for operant conditioning to effect change.

Summary and Conclusions

It was suggested that the best way to evaluate the social validity of the social

worker's newly acquired behavior is to put that behavior to an authentic test in the natural

environment (Cooper et al., 2007, p. 243). When this was done, I was provided with a

direct and authentic assessment of social validity. I was also provided with the

opportunity to conduct a real-world investigation where the social worker's repertoire

was "put into contact with naturally occurring contingencies of reinforcement" (p. 243).

It was posited that automatic positive reinforcement would occur when a behavior

produces a positive reinforcing consequence that was not socially motivated (p. 243). It

was also an assumption that there would be maintenance and generalization of the newly

acquired behaviors (p. 243) as evidenced in comparing the results of the control group

with the group who participated in the informational module. Skinner (1950) proposed

that "if learning is the process we suppose it to be, then it must appear so in the situations

in which we study it…our measures must be relevant and comparable properties…[and]

the dimensions of the changes must spring from the behavior itself" (p. 196).

What was known was that compassion is considered a necessary building block in

effective direct social work practice (Radey & Figley, 2007). Additionally, compassion

could be looked at as a type of continuum where there are the polar opposite

subconstructs of compassion satisfaction or positive affect and compassion fatigue, or negative affect. However, the compassion and empathy (Thomas, 2013, p. 365) provided by the worker to the traumatized client can lead to mental and physical exhaustion can lead to compassion fatigue where the social worker can take the form of PTSD-like symptomology and begin to mimic the disturbances of the client (Baranowsky & Gentry, 2010, p. 8; Cornille & Meyers, 1999). Self-Care can positively affect the social worker leading to compassion satisfaction (Radey & Figley 2007), where the lack of self-care may lead to compassion fatigue (Figley, 2002; Radey & Figley, 2007), further promoting the proposal that there was a relationship between self-care and a continuum of compassion.

What was not known was the empirical relationship between self-care agency and compassion. Therefore, this study examined the relationship between self-care agency and compassion satisfaction spurred on by the contention of Gatlin (2014) who reported that there were only a few studies to date that had focused on the self-care of the social worker (p. 5) causing a gap in the field, which was a rationale for this study. It was proposed that self-care agency is a strategy that can counter the effects of compassion fatigue (Baranowsky & Gentry, 2002; 2010); and "the corrosive effects of compassion fatigue can be reversed" (Bride, 2007, p. 153), transforming negative affect to positive (Stamm, 2010), and promoting compassion satisfaction and the social worker's ability to flourish and remain on the job. But, Stamm (2002) also proposed that in order to holistically understand compassion in professionals like the social worker, one must also look at the interaction of both compassion satisfaction and compassion fatigue, further

suggesting the theory of a continuum of compassion. I suggested that the theoretical

foundation driving this study was the proposal that self-care actions, or deliberate actions,

could have a moderating effect on the compassion satisfaction experienced by the social

worker; and that self-care agency had the potential for leading to an improved

professional quality of life for the social worker participant.

In summary, the literature review revealed that the benefits of the exercise of self-

care agency in the professional social worker had received sparse attention in scholarly

literature and research (Radey & Figley, 2007, p. 210) creating a gap in the field, and

Salloum et al.(2015) suggested that few studies have centered on the benefits of self-care

empirically (p. 54). This lack of research extended to the social work profession. There is

a current view that when the social worker is continuously exposed to the crises and

traumas of clients as part of the job, the worker can experience mental and physical

exhaustion leading to compassion fatigue; and this worker can begin to exhibit the same

range of symptoms as the victims of trauma (Cornille & Meyers, 1999, p. 17) in the form

of PTSD-like symptomology including a full range of PTSD symptoms. And, with

compassion fatigue, the social worker may also display a "diminished capacity to

function at work, home, and within personal relationships" (Baranowsky & Gentry, 2010,

p. 8). However, it was proposed that compassion fatigue is "natural, predictable,

treatable, and preventable" (Jacobson et al., 2013, p. 457).

I proposed that self-care could have an effect on the outcome of compassion

satisfaction; that the self-care actions, a component of self-care agency, could be a key in

producing a variance in measurement in the construct of compassion satisfaction where

self-care actions functioned as the moderating variable; and that this process could be observed through the utilization of an informational module related knowledge and skills training. The present study filled a gap in research and literature by providing empirical data and informed contentions about the relationship between self-care agency and compassion satisfaction, extending the knowledge in the discipline.

I assumed that self-care behaviors could be learned (Godfrey, 2010, p. 28), and oriented towards a certain goal or outcome; that self-care agency was operant behavior; operant behavior was modifiable by its consequences; and the outcome of self-care could affect the variance on a continuum of compassion in the direction of compassion satisfaction, producing a positive change in the social worker. In Chapter 3 I continued to discuss the variables under study, including the rationale for the research design and its connection to the research questions, the methodology and the target population, the sampling procedures, the instrumentation, and statistical analyses used in this study.

Chapter 3: Research Method

Introduction

Based on the suggestion of Slicum-Gori et al. (2011) that very little is known about the factors or variables that either promote or limit the outcomes associated with practicing compassion (p. 172), this was a two-part quantitative, moderation regression design study which put forth that self-care agency was a variable that could moderate compassion satisfaction in the professional social worker participant. The purpose of this study was to examine the extent to which self-care agency could explain the variance in the construct of compassion satisfaction. I proposed that by explaining a variance through moderation regression, the reader could gain a better understanding of the relationship between self-care agency and compassion satisfaction and contribute to the development of theories in the course of empirical data analysis.

As discussed in Chapter 1, what was known by researchers was that the professional social worker can be continuously exposed to the crises and traumas of clients as part of the job, and the compassion and empathy (see Thomas, 2013, p. 365) expended by the worker could lead to mental and physical exhaustion; and could lead to compassion fatigue (see Baranowsky & Gentry, 2010; Bride , 2007; Bride & Figley, 2007; Cunningham, 2004; Fahy, 2007; Kapoulitsas & Corcoran, 2015; Krumer-Nevo et al., 2006; Radey & Figley, 2007; Stamm, 2010) where this individual may begin to exhibit the same range of symptoms as the victims of trauma (Cornille & Meyers, 1999, p. 17). The far-reaching effects could take the form of PTSD-like symptomology, and the reactions of the social worker could begin to mimic the disturbances of the client

(Baranowsky & Gentry, 2010, p. 8; Cornille & Meyers, 1999). This phenomenon is known as both secondary traumatic stress and compassion fatigue in the literature and may include a full range of PTSD symptoms (Newell & MacNeil, 2010, p. 60). And, with compassion fatigue, the social worker may also display a "diminished capacity to function at work, home, and within personal relationships" (Baranowsky & Gentry, 2010, p. 8). The argument was that unchecked compassion stress leading to compassion fatigue may be related to the premature attrition seen in the social work profession (Bride, 2007; Fahy, 2007). However, it was also proposed that compassion fatigue is a "natural, predictable, treatable, and preventable" (Jacobson, Rothschild, Mirza, & Shapiro, 2013, p. 457) phenomenon.

Furthermore, compassion satisfaction was believed to contribute to the mental, physical, and spiritual well-being of helping professionals, and "may mitigate the negative effects of burnout and compassion fatigue" (Harr & Moore, 2011, p. 353). And, key to this study was the proposition that compassion satisfaction may also be a prime motivation for continued service in one's profession. Researchers like Stamm (2010) proposed that when one experiences compassion satisfaction, this individual experiences a pleasure in doing the job well (p. 28); and there is a 'sense of positivity' surrounding this individual's perception of the ability to positively contribute to the work setting and a 'positivity' surrounding colleagues (p. 28); that when an individual experiences compassion satisfaction, there is the experience of happy thoughts, feelings of successful, and happiness with the work that is done; and a desire to continue to doing it, with a belief that the work done can make a difference (p. 21).

It was proposed that if self-care is not an ongoing process for the social worker, that when this individual becomes aware of the risks associated with compassion fatigue related to self, this worker could and should begin to implement self-help and self-care skills (Bride & Figley, 2007). I proposed the infusion of self-care education for the social worker and social worker trainees where this training could act as a conduit; further proposing that training the social worker already practicing in the field could be a recursive process (see Figley, 1998). What the literature review had showed was that this area of research was still in need of empirical data on variables that promote the positive outcomes associated with practicing compassion (see Slicum-Gori et al., 2011, p. 172).

In this chapter, I discussed the rationale of the study and the research design, including a discussion of the variables under study; the chosen research design; the constraints within the design; and the design's relation to the planned informational module. I also discussed the target population, the sampling strategy and procedures; the procedures for recruitment of the participants; the data collection procedures; and the instrumentation used in the study. This study incorporated an informational module, and I examined how the module related to the study. The chapter ends with a discussion of threats to the validity of the results of the study; the ethical procedures that were followed before, during, and after the completion of the study; and a final summary of the design and methodology used in this study.

Research Design and Rationale

The self-care/self-care deficit theory put forth by Orem (1985) guided the independent variable of self-care agency; compassion satisfaction, a component of the

compassion satisfaction/compassion fatigue theory of Stamm (2010) guided the

dependent variable; and the motivating operations theory, a theory put forth by Michael

(2007), guided self-care actions that functioned as the moderating variable of self-care

actions. The premise that I put forth the in this study was that self-care action, a

component of self-care agency, was believed to have an effect on compassion stress and

the outcomes of compassion satisfaction observed on a continuum of compassion (see

Figley, 2002; Radey & Figley 2007). In this study, the DV was compassion satisfaction, a

subconstruct of compassion. The IV, or predictor variable, was self-care agency and its

four subconstructs: (a) the individual's motivation, (b) an active versus a passive

response to situations; (c) the knowledge base of the individual; and (d) the individual's

sense of self-worth (see Kearney & Fleischer, 1979, pp. 26-27; Riesch & Hauch, 1988, p.

245). I proposed that self-care actions could functions as the moderating variable

allowing me to determine the extent to which self-care actions explained a variance in the

construct of compassion satisfaction.

I used a moderation regression approach to data analysis. The overarching aim of

this quantitative moderation regression designed study was to address the proposal that

the effect of the independent variable of self-care agency on the outcome of compassion

satisfaction could depend on the moderator of self-care actions (see Hayes & Matthes,

2009, p. 924). I also proposed that a moderation regression designed study could

illuminate this relationship.

I examined the research questions and hypotheses using regression and a

moderation regression design and statistical control where Hayes (2013) proposed that

"statistical interaction is just another term for moderation" (p. 211). I addressed the following combinations of variables:

- The independent variable to the dependent variable relationship (IV to DV).

- The independent variable to the moderator relationship (IV to M).

- The moderator to dependent variable relationship (M to DV).

- The independent variable to the dependent variable, when controlling for the moderator (IV to DV) relationship when controlling for (M).

I also addressed the divisions of the independent variable as separate independent or predictor variables and examined each division of self-care agency on the dependent variables. The divisions of self-care agency included (a) the individual's motivation (IV-2), (b) an active versus a passive response to situations (IV-1), (c) the knowledge base of the individual (IV-3), and (d) the individual's sense of self-worth (IV-4), while statistically controlling the other variables.

I used two predeveloped, validated, survey tools to collect and measure any variance in data collected in the study. The ProQOL Version 5 Scale (Stamm, 2009) was the instrument used to assess the subconstruct of compassion satisfaction through a discrete scale in this survey, and the construct of self-care agency and its subconstructs was measured through the use of the Exercise of Self-Care Agency Scale developed by Kearney and Fleischer (1979). Using a simple and multiple linear regression design and the original researchers' variable coding, these instruments addressed following of the RQ1. Using a moderation regression design these instruments addressed RQ2 and RQ3.

Using a linear regression design these instruments addressed RQ4. In this study, the moderating effect of self-care actions on the self-care agency was also examined.

There were time and resource constraints with the choice of the moderation regression design for this study. The data gathering was designed to take place within a 6-week period while all participants in the study were to continue with their normal, daily jobs.

- On Week 1, after completing the informed consent form contained on my website, all participants were to answer the two questionnaires, the ProQOL Version 5 Scale (Stamm, 2009) and the Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979). I acknowledged one known resource constraint with one of the survey instruments. One constraint of the ProQOL Version 5 Scale surrounded the questions focusing on behavior and feelings during the last month on the job, which was considered a time constraint. There was also a constraint on successful completion of the *Tools for Trauma: A CBT Approach* informational module. The successful completion required a score of between 80–100%.

- In Week 2: Between Week 1 and the end of Week 2 the program group was to begin and complete the informational module.

- Between Week 3 and Week 4, all module coursework was to be completed.

- In Week 4, participants continued their jobs as usual.

- In Week 5, participants continued their jobs as usual.

- In Week 6, all participants were to go to the website to answer the two original questionnaires a second time: the ProQOL Version 5 Scale and the Exercise of Self-Care Agency Scale.

It was noted that the control group would be given access to the informational module at the end of the study. What could be manipulated here was the time span between the informational module and the posttest. Another resource constraint was the stipulation that the participants must be at least a maser's level professional. Both groups came from a single continuous pretest distribution. I assumed that the informational module was uniformly delivered to all recipients: They received the same amount and veracity of training. I proposed that the moderation regression design choice was consistent with the research design needed to advance knowledge about self-care agency as a variable that could lead to compassion satisfaction in the participant group by showing a change in measure, size or direction. The structure allowed me to address the question that if a change in measure occured and whether it was statistically significant. It was also proposed that this moderation regression design exposed my hypotheses to actual or real-world tests.

This design gave me a means to measure change over time in this both groups of participants from an unnamed roster, with and without the informational module. And, like the single-subject design, the moderation regression design used repeated measures of a targeted variable through statistical manipulation. This design also made use of a baseline, where it was suggested that "a good baseline has enough repeated measures which allows one to rule out extraneous factors that could explain changes in behavior

caused by factors other than the intervention" (Cherry 2000, p. 105) and (c) I believed

that this design would help confirm if the change was or was not due to coincidence

(Cherry, 2000). The results showed that a change did take place and was statistically

significant in the linear regresssion analysis; however, a Benjamini-Hochberg analysis

showed that the p value did not reach a .05 level of significance in a familywise analysis.

I proposed that a moderation regression design would assist in advancing

knowledge in the area of self-care agency for the professional social worker by allowing

for a wait-period to be incorporated into the design. This wait-period allowed for

exposure of the moderating variable, self-care actions, to the real-world environment of

the licensed social worker. This gave me an opportunity to expose the learned self-care

actions of the social worker participant's to their real-world environment, also allowing

the social validity of this study to be examined through a real-world trial. Cooper et al.

(2007) suggested that the best way to evaluate the social validity of the social worker's

newly acquired behavior is to put that behavior to an authentic test in the natural

environment (p. 243). In this study, a posttest analysis was conducted after this real-world

exposure. When this was done, I was provided with a direct and authentic assessment of

social validity of the study.

Self-Care agency was acting as the moderating variable using an informational

module. The premise of the module was that "self-care agency… is an individual's

acquired capability to perform self-care activities…It is the antecedent of self-care"

(Wong et al., 2012, p. 1124). And, a major assumption of this study was that self-care

behaviors and actions were learned behaviors (Godfrey, 2010, p. 28).

To help illuminate this assumption, I used a predesigned, online, the four-session *Tools for Trauma: A CBT Approach* informational module, focusing on enhancing compassion satisfaction through education and training. The participants learned how to manage wellness and self-care through self-care agency and self-care actions. This objective appeared to be in line with McBride (1987) that self-care actions consist of learned behaviors that regulate integrity, functioning, and development (p. 6); and self-care activities where actions are learned by the individual and oriented towards a particular outcome (p. 692).

Other objectives of the informational module included the goal that participants would "ascertain prevention and resiliency skills and knowledge that could be used for self and others; distinguished compassion fatigue triggers and scout for warning signs; recognize and employ resources; and plan for prevention and resiliency" (Traumatology Institute, 2012, p. 1). All of these objectives appeared to be consistent with a review of the literature theorizing with McBride (2002 that "one must have the necessary knowledge, skill, and motivation (, p. 2), and with Sȯderhamn (2000) theorizing that "individuals who can produce effective self-care have knowledge about their environment and themselves" (p. 184). I believed that these theories helped me defined the purpose of adding the informational module into the study. The addition of the module would help develop or enhance the professional social worker's tools available for trauma related work and self-care in the work environment.

In addition, Godfrey et al. (2011) suggested that self-care actions were based on the social worker's knowledge and experience (p. 6); where it was proposed that "an

inability to meet the demand constitutes a self-care deficit" (McBride, 1987, p. 311).

Edwards (1997) tended to agree suggesting that "if self-care agency is not adequate to

meet demands, a self-care deficit exists which requires ...intervention" (p. 15). These

theories also appeared to be consistent with McBride (1987) who suggested that when on

speaks of an individual's power of agency, it is in reference to

> The ability to reason; motivation; the ability to make decisions and
>
> operationalize them; the ability to acquire, retain, and operationalize knowledge;
>
> a repertoire of cognition, perceptual, manipulative, communicative and
>
> interpersonal skills; the ability to order self-care actions; and the ability to
>
> internalize behaviors. (p. 311)

I suggested that with the acquired information conveyed through the module, the

professional social workers would be supported in trauma work. The social workers

would be able to successfully put to use the knowledge and skills acquired to

accommodate the client, and also have the ability to support themselves in trauma

practice.

Another objective of the informational module was "to add resolution exercises to

the repertoire" (Traumatology Institute, 2012, p. 1) of the social worker, or helping

professional (p. 1). This study also focused on Michael's (2007) theories of motivating

operations and the theories surrounding repertoire-altering effects that target the social

worker's repertoire. Enhancing the social worker's repertoire was supported by the

proposal that the social worker's repertoire contains a collection of knowledge and skills

that this individual has learned that are relevant to particular settings (Cooper et al., 2007,

p. 27), like the job setting or to tasks performed with the inclusion of self-care actions. This study proposed to develop, and/or enhance, the social worker's repertoire by incorporating theories and strategies about the constructs of compassion and self-care contained within *Tools for Trauma: A CBT Approach* informational module targeting the personal and environmental history of the social worker participant.

Using the theories of Michael (2007), I postulated that the self-care actions used in this informational module would have a repertoire altering effect. And, I further postulated that self-care actions had the potential to increase the current frequency of all behaviors that had been reinforced by self-care actions. When considering personal and environmental factors affecting self-care agency and the enabling trait, I proposed to enhance the social worker's personal capabilities to engage in self-care through (a) providing knowledge; (b) providing an introduction to self-care skills; and (c) providing knowledge of the health values of self-care, the need for persistence, and of having a purposeful goal (Sousa, 2002, p. 2). With the operational traits, the aim of the informational module was to enhance the personal capabilities of the social worker where this worker would recognize "personal and environmental conditions that are significant" (p. 2) that involve the social worker's action, judgment and decision-making about what that social worker "can, should, and actually does do" (p. 2) and the actual performance of self-care actions (p. 2). This was in line with Sousa (2002) who proposed that "any disturbance in one of [the] capabilities affects the social worker's deliberate actions" (p. 2).

An advantage of using the informational module was that the instruction used in this module could be uniformly delivered to all participants. I proposed that this instruction would be presented each time with same vigor to each participant because it had been pretaped with the audio and visual information in an online format. Therefore, each participant would receive the same dosage, or amount of teaching from the presenter in the module.

When taking this module, all participants were required to demonstrate a set level of proficiency on each of the four segments and the final exam included in the module. In this 4–session informational module, there were performance objectives that required a mastery level of 80% - 100% at the end of each session. There was also a final exam that requires 80% - 100% proficiency for a certificate of completion. Therefore, this module required a predetermined level of mastery from all participants.

Another advantage of this module was that, upon completion of additional modules in this series, the participant could then apply for additional credentialing in trauma. And, based on the parameters set for participation in the study, all participants from this study would automatically qualify to proceed for credentialing. Although the trauma certification was designed for mental health care professionals with at least a master's degree (or an M.A. in progress), or 4-years of counseling work with on-going supervision, the developer the program suggested that the professional taking this course could also include therapist/counselors, psychiatrists, psychologists, clergy, social workers, employee assistance professionals, clinical supervisors and other helping professionals (Traumatology Institute, 2012, p. 1).

This informational module also provided the opportunity for a real-world investigation of the hypotheses where the social worker's repertoire was "put into contact with naturally occurring contingencies of reinforcement" (Cooper et al., 2007, p. 243) after the completion of the module. Adhering to the suggestions of Cooper et al. I posited that automatic positive reinforcement would occur when a behavior produced a positive reinforcing consequence that was not socially motivated (p. 243). A justification for the techniques used in the informational module came from Skinner (1950) who proposed that "if learning is the process we suppose it to be, then it must appear so in the situations in which we study it…our measures must be relevant and comparable properties… [and] the dimensions of the changes must spring from the behavior itself" (p. 196).

Methodology

Target Population

The target participant for this study was the licensed professional social worker who is exposed the crisis and trauma of clients as part of the job. And, to examine the variables under study, self-care agency, self-care action, and compassion satisfaction, this study enlisted 46 participants invited from a roster of licensed social workers, who were recruited through a postcard containing a unique ID number that was randomized. This roster has over 5000 members at any given time. Members of this roster included the Licensed Baccalaureate Social Worker (LBSW), Licensed Masters Social Worker (LMSW), and two independent categories. For independent practice, there was the Licensed Independent Social Worker-Clinical Practice (LISW-CP), and Licensed

Independent Social Worker-Advanced Practice (LISW-AP), and each strata of the roster had common characteristics.

For this study, participants were obtained from the Licensed Master's Social Worker strata and higher. The sampling strategy to be used was random sampling. This allowed I to examine a random population from this chosen stratum of the roster. As members agreed to participate, groups were chosen by even and odd number ID's that were randomly assigned with the even numbers assigned to the program group and the odd numbers assigned to the control group. The computer program was automatically designed to close group selection when the designated group allocation was reached. The control group would be exposed to the informational module at the end of the study.

Sampling and Sampling Procedures

Before drawing the sample, I built an independent survey website through the SurveyMonkey's online program to explore if, and how, self-care agency can affect the measures observed in the subconstruct of compassion satisfaction. The study was approved by the university's IRB. After contacting the administrators of the roster I was sent guidelines for pertinent for use of the roster information on the designated strata from administrators of roster. After using a randomizing program with the postcard addresses producing unique ID's, willing participants supplied me with email information that was entered into the designed participant database.

This study was a moderation regression design pretest-posttest control group model where both the program and the control group sample were drawn from the social work population of the tier of licensed of master's level or higher members. There was

the assumption that all of the members of the strata were representative of the total social

workers population of the state from which it was drawn. And, in protecting the

anonymity of the participants, this study did not name the roster from which the

participants were solicited. It is made known here to the reader that identifying

information of the roster, both in text and in the reference section was not presented in its

entirety to protect the anonymity of the participants. This roster defined the category

Licensed Masters Social Worker as:

> The application of social work theory, knowledge, methods, and ethics, and the
>
> professional use of self to restore or enhance social, psychosocial, or
>
> biopsychosocial functioning of individuals, couples, families, groups,
>
> organizations, and communities. Masters Social Work Practice requires the
>
> application of specialized knowledge and advanced practice skills in the areas of
>
> assessment, treatment planning, implementation and evaluation, case
>
> management, information and referral, mediation, client education, counseling,
>
> advocacy, supervision of employees, consultation, research, community
>
> organization and development, administration of social work policies, programs
>
> and activities, and outcome evaluation. The practice of Masters Social Work may
>
> include the practice of Clinical Social Work under clinical supervision within a
>
> recognized, organized setting such as social, medical, and governmental agencies.
>
> LMSW's may engage only in supervised practice in such agencies and may not
>
> practice privately or independently. (Professions, 2015)

This roster defined the category Independent Social Work - Clinical Practice/Advanced Practice as:

> The professional application of social work theory, knowledge, methods, principles, values, and ethics, and the professional use of self to restore or enhance social, psychosocial, or biopsychosocial functioning of individuals, couples, families, groups, and direct clinical needs of organizations and communities. The practice of Clinical Social Work requires the application of specialized clinical knowledge and advanced clinical skills in the areas of assessment, diagnosis, and treatment for mental, emotional, and behavioral disorders, and conditions. Treatment methods include the provision of individual, marital, couple, family, and group counseling and psychotherapy. The practice of independent clinical social work includes case management, information and referral, mediation, client education, supervision of employees, consultation, research, advocacy, outcome evaluation, and expert testimony. The practice of Independent Social Work - Clinical Practice may include private practice. A Licensed Independent Social Worker - CP may not practice advanced practice social work independently. The Independent Social Worker - CP may engage in the activities included under the practice of Masters Social Work. (Professions, 2015)

In the targeted strata of this roster, it was noted that the phrase"…the professional use of self to restore or enhance social, psychosocial, or biopsychosocial functioning of individuals, couples, families, groups, organizations, and communities" Professions

(2015) was used when referring to this professional; and, the self-care of this professional

group was the target of this study. Based on the information provided about this tier, I

proposed that the members of the master's level tier and above of this roster were

representative of the total social workers population of the roster from which it was

drawn.

To determine the practical sample size for this study, or to determine how many

participants I needed to assess results, effect, and relationship, I used the G*Power

(Laureate Education, Inc., 2009b), a power analysis program software, to assist in the

calculations. The G*Power program provided effect size calculators and offers five

different types of statistical power analysis, one of which was a priori, which was used in

this study (G*Power 3.1 Manual, 2014). The acceptable power value that I used was 80

or 80%, and the proposed alpha level is .05. The rationale for this measure was that this

would be an a priori entry, and therefore the effect size would be set at medium and the

sample size would help answer the research questions with the specified level of

confidence (Laureate Education, Inc., 2009a).

For this study, I solicited a sample size of 92 participants which was needed when

requesting a medium effect size of .15, an alpha level of .05, power level of .80, and

predictors totaling 5. This information was determined a priori from the output of the

G*power software and its *F* tests of Linear multiple regression: Fixed model, R^2

deviation from zero. As discussed in the previous chapters, in the moderation regression

design, I expected that at a power level of 0.80, the effect size would extremely low,

which is typical of this design. The sample size obtained for the study was 46 participants.

Procedures for Recruitment, Participation, and Data Collection

I built a research website through SurveyMonkey and collected the raw data through this site. I gained access to a roster of licensed social workers and invited members of the roster to participate in this study, targeting the participant with at least a master's degree or higher. I received a list of addressed that has been approved by the roster of licensed social workers administrators. Prior to me sending out the postcard invitations, I assigned each postcard address a random ID number using the Research Randomizer program. Then participants from the designated roster were recruited for the study by way of postcard. If the individual agreeed to participate in the study, this new participant would use the randomize ID number to complete the surveys and to take the informational module. This process of giving each potential participant a unique ID assisted with anonymity where participant data was gathered based on the unique ID number instead of their email address.

To protect the identity and confidentiality of the participant, I also used the anonymous feature incorporated in the SurveyMonkey program when the email address provided by the participant was first entered into the database. By default in this program, the IP address and email address of participants were stored with the survey results. However, there was the option in the program for me to make responses anonymous, concealing identifying information on the participant including email addresses, IP addresses, and IP tracking. This was option that I chose.

And, after entering these addresses into a database, information on the paper copy of the email addresses were transferred to a thumb drive, password protected, and put in a locked file cabinet. The original paper copy was shredded. From this point on the participant were referred to by their anonymous, randomized ID number. Upon agreeing to participate in the study, the participant were given a password to access the site. The website provided Secure Socket Layer (SSL) encryption where sensitive participant information that may be transmitted would be encrypted creating a secure connection for the participants. With the SSL encryption, the following browsers were supported: Chrome 16 or later, Firefox, 13.0 or later, Safari 5.0 of later and Internet Explorer 9.0 or later.

When reaching my website, potential participants were given a brief introduction to the study and a website link to proceed to if they were interested in participating. At this point, after reading about the purpose of the study, the participant was given the option to not have their data included in the study, and decline participation by clicking the "I Do Not Agree" button. Conversely, if the individual social worker agreed to have their data included, this individual was asked to click the "I Agree" button after reading an Informed Consent document. An informed consent document embedded in the website was viewed, confirmed, and checked by the participant before proceeding to the surveys: the ProQOL Version 5 Scale (Stamm, 2009) and the Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979) if the individual decided to participate in the study.

With SurveyMonkey was not possible to provide an oral explanation of the study to the potential participant, or to take oral consent. I followed the following guidelines which meant

All of the relevant information [will] be given on the first page of the survey, and [will] follow the pattern of a paper-based information sheet, covering the identity of me, contact details, the reason for conducting the survey, the use to be made of the data…Warnings should be given if the survey covers potential sensitive issues, and sources of further support and information should be given if warranted. The consent procedure …can be addressed by presenting the items normally found on a paper-based consent form such that the items must be endorsed before the next page can be opened. (Knussen & McFadyen, 2014, p. 1)

Therefore, when reaching my website, the participants were given a brief introduction to the study and a website link to precede to if the participant was interested in participating. At this point, after reading about the purpose of the study, the participant was given the option to not have their data included in the study, and decline participation by clicking the "I Do Not Agree" button. It the participant declined participation by clicking the "I Do Not Agree" button, this participant was routed to a "Thank You for Your Time" page. However, after reading the Informed Consent document, if the participant agreed to have their data included, the participant was asked to click the "I Agree" button.

The informed consent document was embedded in the website. The participant was asked to confirm that he/she understood the Informed Consent and check the "I

Agree" button before proceeding to the surveys: the ProQOL Scale Version 5 (Stamm, 2009) and the Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979). The embedded form contained these phrases: "When signing this form, I am agreeing to voluntarily enter this study. I have had a chance to read this consent form, and it was explained to me in a language which I use and understand. I understand that I can withdraw at any time. A copy of this Informed Consent Form has been provided to me". A copy of this form could be printed immediately after it was acknowledged.

The website allowed me to collect survey responses from agreeing participants without them having to leave my survey site. The website was designed to stop collecting initial responses to the surveys when the specified maximum count was reached. Other potential participants entering the site after the stop date would receive a message that the survey was closed. For this study, all the participants answered the same set of questions before and after, as stipulated by their group assignment. Consenting participants were divided into a program and a control group where data was be collected through a two-group pretest-posttest (Trochim, 2006a) control model using two validated questionnaires: the ProQOL Scale Version 5 and the Exercise of Self-Care Agency Scale, which are both considered valid measurement instruments in a review of the literature. The program group included only those participants who have an even numbered ID. The control groups included only those participants with an odd number ID.

On the web site, I had the link to the program that was used as the informational module, *Tools for Trauma: A CBT Approach*. Participants with even number IDs proceeded directly on to the training program. The participant entered the same unique ID

number on this website to participate in the 4 - session informational module. At the specified date range, all participants were asked to take the second survey. One of the most important criterions for this module was its successful completion by earning a score of between 80% and 100%. At the end of data collection, I analyzed the data using regression analyses.

Following the premise of respect for persons, I observed standard protocols that assisted in protecting the anonymity of the participants. For demographic data, I asked the participant for the age, sex, and years of service with traumatized clients. And, immediately at the end of the study, I provided debriefing for the participants in the study. A form embedded in website of the study thanked the participant for their part in the study. On this form, I also reviewed previously shared information about the study, and now included more in-depth information on the purpose of the study, hypotheses of the study, and the findings of the study. The participants were also given a list of resources for further reading on the constructs under study.

The participants were also given contact information to follow-up for the actual results of the study. The participants were given contact information if they had questions, concerns, or comments about this research study, however, researcher did not foresee any or very low risk involved in the study. However, if the participant felt concerned about anything raised by this study, they were given contact information for me, the committee chair, and the IRB.

The Informational Module

This study used the *Tools for Trauma: A Cognitive Behavioral Therapy (CBT) Approach* informational module as the as the moderating variable. This predesigned, online 4-session module focused on knowledge and skills of principles and techniques of cognitive behavioral therapy that the professional social worker could integrated into their work with survivors of trauma and as self-help skills. The goal of module was to help the participant to

- Be aware of the underlying principles of behavioral, cognitive, and cognitive behavioral therapy that are reported to lead to the resolution of posttraumatic stress.

- Be aware of the psychophysiology of posttraumatic stress.

- Be aware of how to apply CBT toward the fulfillment of specific criteria in each of the three phases of tri-phasic model of treatment with trauma survivors;

- Be able to apply effective trauma stabilization and resolution interventions that best fit the unique requirements of any survivor;

- Be able to utilize many different CBT techniques to help trauma survivors resolve the effects of their memories and posttraumatic symptoms;

- Be able to utilize CBT techniques to assist trauma survivors in developing more satisfying lifestyles in the present;

- Recognize and employ resources and plan for prevention and resiliency;

- Control arousal reduction methods in addition to grounding and containment skills; and

- Add resolution exercises to the repertoire. (Traumatology Institute, 2012, p. 1)

Both the program group and the control group continued with their usual everyday job assignments in their usual environments unfolding as usual throughout the study. Based on the structure of the *Tools for Trauma: A CBT Approach*, I assumed that the informational module was uniformly delivered to all participants; that the instruction was be presented through with same vigor to each participant because it had been pretaped with audio and visual information. Therefore, each participant received the same dosage, or amount of information.

The Nature Informational Module

The data gathering was designed to take place within a 6-week period of time while all participants in the study continue their normal, daily jobs.

- On Week One, after completing the informed consent form contained on my website, all participants were to answer the two questionnaires, the ProQOL Version 5 Scale (Stamm, 2009) and the Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979). The participants with the even numbers proceeded to the informational module first.

- In Week Two: Between Week 1 and the end of Week 2 the program group was to begin and complete the informational module.

- In Week Three, the module was to be completed.

- In Week Four, participants continued their jobs as usual.

- In Week Five, participants continued their jobs as usual.

- In Week Six, all participants were to go to the website to answer the two original questionnaires a second time: the ProQOL Version 5 Scale and the Exercise of Self-Care Agency Scale. It was noted that the control group would be given access to the informational module at the end of the study with all receiving a follow-up discussion.

- Both groups came from a single continuous pretest.

- It was an assumption of this study that the program was uniformly delivered to all participant and that they receive the same amount of training.

It was proposed that the moderation regression design choice was consistent with research designs needed to advance knowledge about self-care agency and self-care action as variables that could lead to compassion satisfaction in the program group by showing that there was a moderation effect. The structure allowed me to address the question that if a change in measure occurred, was this change statistically significant? Like the regression discontinuity design that was not selected for this study, the moderation regression design appeared to also present me with a modified version of the single-subject design, where a review of the literature suggested that a single-subject design could be considered an objective approach for monitoring specific behaviors in any single entity (Cherry, 2000, p. 110). And, like the single-subject design and the regression discontinuity design, the moderation regression design used repeated measures of a targeted variable as seen in bootstrapping, which was a technique used in this study.

I proposed that this study's moderation regression design assisted in advancing knowledge in the area of self-care agency and self-care actions in the professional social

worker by allowing for a wait-period to be incorporated into the design. In this study, this

wait-period allowed for exposure of the moderating variable, self-care actions, to the real-

world environment of the licensed social worker. This gave me an opportunity to expose

the learned self-care actions of the social worker participant's to their real-world

environment; also allowing the social validity of this study to be examined through a real-

world trial. Cooper et al. (2007) suggested that the best way for me to evaluate the social

validity of the social worker's newly acquired behavior was to put that behavior to an

authentic test in the natural environment (p. 243). In this study, a posttest analysis was

conducted after this real-world exposure. When this was done, I was provided with a

direct and authentic assessment of social validity of the study.

The premise of the informational module was that "self-care agency… is an

individual's acquired capability to perform self-care activities…It is the antecedent of

self-care" (Wong et al., 2012, p. 1124); and a major assumption of this study was that

self-care behaviors and actions are learned behaviors (Godfrey, 2010, p. 28). I proposed

that the pre-designed, online 4-session information module helped illuminate this

assumption, focusing on enhancing compassion satisfaction through education and

training, and "adding resolution exercises to the repertoire" (Traumatology Institute,

2012, p. 1) of the social worker, or helping professional (p. 1).

Justification for the associations came from the work of several researchers.

- McBride (1987) suggested that when one speaks of an individual's power of

  agency, it is in reference to "(a) ability to reason, (b) motivation, (c) ability to

  make decisions and operationalize them, (d) ability to acquire, retain, and

operationalize knowledge, (e) repertoire of cognition, perceptual, manipulative

communicative and interpersonal skills, (f) ability to order self-care actions, and

(g) the ability to internalize behaviors" (p. 311).

- Edwards (1997) suggested that "if self-care agency is not adequate to meet

    demands, a self-care deficit exists which requires …intervention" (p. 15).

- According to McBride (2002) "one must have the necessary knowledge, skill, and

    motivation (p. 2).

- Godfrey et al. (2011) suggested that self-care actions are based on the social

    worker's knowledge and experience (p. 6).

Instrumentation and Operationalization of Constructs

I used predeveloped survey questionnaires that have been constructed to be clear,

and appear to capture the full range of responses that I sought to explore (Wadsworth

Cengage Learning, 2006). I proposed that the instruments chosen for this study had been

appropriately operationalized and demonstrated adequate validity and reliability, and

would appropriately measure the outcome data (Patton, 2002, p. 211). Patton (2002)

suggested that validity "depends on careful instrument construction to insure that the

instrument measures what it is supposed to measure" (p. 14) and this study used two

instruments to gather data: the ProQOL Version 5 Scale and the Exercise of Self-Care

Agency Scale, which were considered valid measurement instruments.

The ProQOL Scale Version 5

The ProQOL Version 5 Scale is a 30-item questionnaire developed by Stamm

(2009) to assess Compassion Satisfaction and Compassion Fatigue. The ProQOL Version

5 instrument has three discrete scales (Stamm, 2010, p. 4). Stamm (2010) reported that previous versions of the ProQOL Scale had difficulty separating burnout and secondary/vicarious trauma, and as a consequence, a shortened version was developed. It was proposed that this shorten version of 30 items "reduces the participant's burden of answering a larger number of items on the questionnaire" (p. 4). Stamm (2010) informed that "this scale is based on over 1000 participants from multiple studies where the strongest and most salient items were retained… [with] 3 new items designed to strengthen the overall theory of the subscale" (p. 4). These new items incorporated into these scales "were developed based on the most current literature on burnout and theory relating to compassion satisfaction where initial data suggested that the subscales have excellent internal consistency" (p. 4).

Stamm (2010) reported that on the revised scale, the average score for compassion satisfaction was 37, with a standard deviation of 7, and alpha scale reliability of .87, showing that about 25% of the participants tended to score higher than 42 and about 25% tended to score below 33. I acknowledged that an advantage of using the ProQOL Scale was that it has been used as a measuring instrument of compassion across many different types of professions (p. 6). It was proposed that, with the reduction in items on the questionnaire, the "item-to-scale statistics have improved due to increased specificity and reduced collinearity" (Stamm, 2010, p. 8); that "early returns on test-retest data suggest good reliability across time with a small standard error of the estimate"(p. 8). In this study, the Professional Quality of Life (ProQOL) Scale Version 5 assessed the dependent variable of compassion satisfaction, focusing on the responses of the

participants on the instrument's compassion satisfaction scale. I also focused on these responses when conducting the moderation regression analysis. The ProQOL Scale has also been used in recent studies (Harr & Moore, 2011; Jacobson, 2012; Khan et al., 2015; Ray et al., 2013; Slicum-Gori et al., 2011; Smart et al., 2014; Sprang et al., 2007; Sprang et al., 2011) with populations that include the social worker, employee assistance participants, healthcare providers, healthcare workers, mental health providers, hospice pallative care populations, and child welfare workers.

The Exercise of Self-Care Agency Scale

The second instrument used in this study was the Exercise of Self-Care Agency Scale developed by Kearney and Fleischer (1979). It was used to measure the independent variable of self-care agency and its four divisions: (a) the social worker's motivation, (b) an active versus a passive response to situations; (c) the knowledge base of the social worker; and (d) the social worker's sense of self-worth (Kearney & Fleischer, 1979, pp. 26-27). And, important to this study was if the questionnaire has subscales or subfactors, alpha should be applied separately to these subscales (Field, 2013, p. 709), allowing me to treat each division as a predictor variables.

In original study of Kearney and Fleischer (1979), the reliability of the Exercise of Self-Care Agency Scale instrument found: "test-retest reliability (.77) and split-half (.80)… with a range of test-retest correlations for 10 weeks to be .54 to .90 indicating moderate to high reliability of the scales" (Yamashita, 2004, p. 75). It was also noted by Riesch and Hauch (1988) that during the construction of the original Exercise of Self-

Care Agency instrument, 11 nurse experts were selected to examine the scale's content

validity (Riesch & Hauch, 1988, p. 246).

In a study by Riesch and Hauch (1988), four divisions or subconstructs of the

Self-Care Agency Scale were also reported. And, in determining factor reliability for the

entire Exercise of Self-Care Agency Scale, Riesch and Hauch's (1988) analysis showed

four factors: self-concept (r =.813), Initiative (r =.815), Knowledge (r =.761), and

Passivity (r =.730) with a total scale score (r =.904) (p. 251). It was reported that the total

scale, and factors, were considered a high degree of internal consistency (p. 251). Factor

correlations "ranged from .31 to .57 indicating the factors and items are not too similar or

redundant "(p. 251).

Robichaud-Ekstrand and Loiselle (1998) examined the exercise of self-care

agency in heart patients in a sample of French Canadian participants. It was found that

the internal consistency coefficients were similar to those achieved in prior studies, but

the mean scores on the Exercise of Self-Care Agency Scale were somewhat higher than

those of Riesch and Hauch (1988, p. 77). And, in a comparative analysis to the English

version, it showed that "Cronbach alphas for the French Exercise of Self-Care Agency

Scale's subscales tended to be lower" (p. 77): self-concept (0.57 to 0.69),

initiative/responsibility (0.72 to 0.80), knowledge/information seeking (0.80 to 0.79) and

taking action (0.49 to 0.62); and it was noted that the French Exercise of Self-Care

Agency Scale appeared stable within the 6 week period (p. 77).

The Exercise of Self-Care Agency Scale was also translated to Japanese and used

by Yamashita (2004) with a convenience sample of 461 nursing and early childhood

education students. The English and Japanese versions of the scale were compared (p. 70)

to determine the extent to which nursing students in Japan exercised self-care agency.

Face validity was evaluated by three faculty members familiar with Orem's model, and

other validity was assessed through a factor analysis method. The results showed that the

internal consistency of the instrument was good. The scale showed a Cronbach's alpha of

.86; and the subscale reliability coefficients ranged from .85 to .86. It was also reported

that test-retest reliability was .80, and unpaired t tests were executed because of

unmatched responses between pre-and-posttests (p. 73).

Wong et al. (2012) conducted a study where the Exercise of Self-Care Agency

Scale was translated into Chinese-Cantonese, and data was gathered from a convenience

sample of 477 Chinese adolescent girls with dysmenorrhea (p. 1122). These participants'

scores assisted in evaluating the reliability and validity of this version of the Exercise of

Self-Care Agency Scale. Reliability was tested using internal consistency and test-retest

reliability, and construct validity was assessed using exploratory factor analysis. Wong et

al. (2012) reported the results the Chinese-Cantonese version indicated a high level of

equivalence with the original version, and also exhibited a high internal consistency and

test-retest reliability. With exploratory factor, and construct validity, a four factor model

was also generated. For the test-retest reliability, "the ICC coefficients (95% confidence

intervals) over 4-week interval were 0.81 (0.74-0.85) for the overall score (p< 0.001)" (p.

1127). For the internal consistency, "the Cronbach's alpha coefficients of the refined 35-

item Chinese-Cantonese version were 0.92, and 0.77-0.91 for the overall scale and its

four subscales, respectively" (p. 1127). And, in this Wong et al. (2012) study, the four

factors accounted for 48% of the variance. Based on a review of the literature, I used the

Exercise of Self-Care Agency's subfactors or subdivisions (a) the social worker's

motivation; (b) an active versus a passive response to situations; (c) the knowledge base

of the social worker; and (d) the social worker's sense of self-worth (Kearney &

Fleischer, 1979, pp. 27-27) to measure the predictor variable of self-care agency.

Operationalizing of Variables

To measure of the dependent variable of compassion satisfaction, I used the

ProQOL Version 5 Scale (Stamm, 2009). This scale contains 30 items, asking for self-

reported responses by each participant. The participant was asked to honestly answer

questions about negative and positive feelings concerning compassion (a) when

considering their current work situation, (b) and themselves, (c) within the last 30 days.

In this study, compassion satisfaction was defined as personal satisfaction felt by the

individual in doing their job (Stamm, 2009). The participant responded to statements like

"I am happy" (Stamm, 2009); rating each statement on a Likert-type scale with a span of

1-5: where 1 is "never" and 5 is "very often"; where higher ratings represent a higher

perceived compassion satisfaction.

"Self-care agency… is an individual's acquired capability to perform self-care

activities…It is the antecedent of self-care" (Wong et al., 2012, p. 1124). To measure the

independent variable of self-care agency, I used the Exercise of Self-Care Agency Scale

(Kearney & Fleischer, 1979). This scale contains 43 items measured on a 5 point Likert-

type scale. The respondents were asked to self-report and respond to statements like "I

like starting new projects" with point value on this scale that ranges from 0-4: where *0* is

"very uncharacteristic", to 4, "very characteristic of me" (Kearney & Fleischer, 1979, p. 31). In this scale, total scores can vary from 0 to 172, where a higher score indicates that this individual identifies with higher perceive self-care agency ((Kearney & Fleischer, 1979, pp. 26-27; Riesch & Hauch, 1988). It is proposed that the Exercise of Self-Care Agency Scale could be completed in 8 to 10 minutes (Riesch & Hauch, 1988, p. 245).

Self-Care actions, or deliberate self-care activities, were manipulated in this study. The program group was administered a 4-session informational module requiring an 80% mastery level upon course completion. For the duration of the study, the control group was not be administered the module. Data was recorded and analyzed from the program group with the module and the control group without the module. At the conclusion of the study, the control group was offered the same informational module as the program group.

Research Questions and Hypotheses

In addition to the Exercise of Self-Care Agency Scale, the four subfactors of the scale provided information on the relationship between the exercise of self-care agency (*IV*) and compassion satisfaction (*DV-1*), and they were instrumental in answering the research questions.

Compassion satisfaction.

The tentative research questions and hypotheses were:

RQ1: Is there a statistically significant linear relationship between the exercise of self-care agency and compassion satisfaction in the population under study?

H_01_1: There is not a statistically significant linear relationship between the exercise of self-care agency *(IV-1)* and compassion satisfaction (*DV-1*) in the population under study?

H_a1_1: There is a statistically significant linear relationship between the exercise of self-care agency (*IV-1*) and compassion satisfaction (*DV-1*) in the population under study?

H_01_2: There is not a statistically significant linear relationship between the exercise of self-care agency 2 *(IV-2)* and compassion satisfaction (*DV-1*) in the population under study?

H_01_2: There is a statistically significant linear relationship between the exercise of self-care agency 2 *(IV-2)* and compassion satisfaction (*DV-1*) in the population under study?

H_01_3: There is not a statistically significant linear relationship motivation/initiative and responsibility (*IV-3*) and compassion satisfaction (*DV-1*) in the population under study.

H_a1_3: There is a statistically significant linear relationship between motivation/initiative and responsibility (*IV-3*) to compassion satisfaction (*DV-1*) in the population under study.

H_01_4: There is not a statistically significant linear relationship between an active versus a passive response to situations (*IV-4*) and compassion satisfaction (*DV-1*) in the population under study.

H_a1_4: There is a statistically significant linear relationship between an active versus a

passive response to situations (*IV-4*) and compassion satisfaction (*DV-1*) in the

population under study.

H_01_5: There is not a statistically significant linear relationship between knowledge

and information seeking (*IV-5*) and compassion satisfaction (*DV-1*) in the population

under study.

H_a1_5: There is not a statistically significant linear relationship between knowledge

and information seeking (*IV-5*) and compassion satisfaction (*DV-1*) in the population

under study.

H_01_6: There is not a statistically significant linear relationship between self-worth,

self-esteem, and self-concept (IV-6) and compassion satisfaction (*DV-1*) in the

population under study.

H_a1_6: There is a statistically significant linear relationship between self-worth, self-esteem,

and self-concept (*IV-6*) and compassion satisfaction (*DV-1*) in the population under study.

Secondary traumatic stress.

RQ1: Is there a statistically significant linear relationship between the exercise of

self-care agency (IV) and secondary traumatic stress in the population under study?

$H_01_{7:}$ There is not a statistically significant linear relationship between the exercise of

self-care agency *(IV-1)* and secondary traumatic stress (*DV-2*) in the population under

study?

H_a1_7: There is a statistically significant linear relationship between the exercise of self-care agency (*IV-1*) and secondary traumatic stress (*DV-2*) in the population under study?

H_01_8: There is not a statistically significant linear relationship between the exercise of self-care agency 2 *(IV-2)* and secondary traumatic stress (*DV-2*) in the population under study?

H_01_8: There is a statistically significant linear relationship between the exercise of self-care agency 2 *(IV-2)* and secondary traumatic stress (*DV-2*) in the population under study?

H_01_9: There is not a statistically significant linear relationship between Motivation/Initiative and Responsibility (*IV-3*) and secondary traumatic stress (*DV-2*) in the population under study (*DV-1*).

H_a1_9: There is a statistically significant linear relationship between Motivation/Initiative and Responsibility (*IV-3*) to secondary traumatic stress (*DV-2*) in the population under study (*DV-1*).

H_01_{10}: There is not a statistically significant linear relationship between an active versus a passive response to situations (*IV-4*) and secondary traumatic stress (*DV-2*) in the population under study.

H_a1_{10}: There is a statistically significant linear relationship between an active versus a passive response to situations (*IV-4*) and secondary traumatic stress (*DV-2*) in the population under study.

$H_0 1_{11}$: There is not a statistically significant linear relationship between knowledge and information seeking (*IV-5*) to secondary traumatic stress (*DV-2*) in the population under study.

$H_a 1_{11}$: There is not a statistically significant linear relationship between knowledge and information seeking (*IV-5*) and secondary traumatic stress (*DV-2*) in the population under study.

$H_0 1_{12}$: There is not a statistically significant linear relationship between self-worth, self-esteem, and self-concept (IV-6) and secondary traumatic stress (*DV-2*) in the population under study.

$H_a 1_{12}$: There is a statistically significant linear relationship between self-worth, self-esteem, and self-concept (*IV-6*) and secondary traumatic stress (*DV-2*) in the population under study.

Burnout.

RQ1: Is there a statistically significant linear relationship between the exercise of self-care agency and burnout in the population under study?

$H_0 1_{13:}$ There is not a statistically significant linear relationship between the exercise of self-care agency (*IV-1*) and burnout (*DV-3*) in the population under study?

$H_a 1_{13:}$ There is a statistically significant linear relationship between the exercise of self-care agency (*IV-1*) and burnout (*DV-3*) in the population under study?

$H_0 1_{14:}$ There is not a statistically significant linear relationship between the exercise of self-care agency 2 *(IV-2)* and burnout (*DV-3*) in the population under study?

$H_a1_{14:}$ There is a statistically significant linear relationship between the exercise of self-care agency 2 *(IV-2)* and burnout (*DV-3*) in the population under study?

H_01_{15}: There is not a statistically significant linear relationship between motivation/initiative and responsibility (*IV-3*) and burnout (*DV-3*) in the population under study.

H_a1_{15}: There is a statistically significant linear relationship between motivation/initiative and responsibility (*IV-3*) and burnout (*DV-3*) in the population under study.

H_01_{16}: There is not a statistically significant linear relationship between an active versus a passive response to situations (*IV-4*) and burnout (*DV-3*) in the population under study.

H_a1_{16}: There is a statistically significant linear relationship between an active versus a passive response to situations (*IV-4*) and burnout (*DV-3*) in the population under study.

H_01_{17}: There is not a statistically significant linear relationship between knowledge and information seeking (*IV-5*) to burnout (*DV-3*) in the population under study.

H_a1_{17}: There is not a statistically significant linear relationship between knowledge and information seeking (*IV-5*) and burnout (*DV-3*) in the population under study.

H_01_{18}: There is not a statistically significant linear relationship between self-worth, self-esteem, and self-concept (*IV-6*) and burnout (*DV-3*) in the population under study.

H_a1_{18}: There is a statistically significant linear relationship between self-worth, self-esteem, and self-concept (*IV-6*) and burnout (*DV-3*) in the population under study.

RQ2: Is there a statistically significant relationship between self-care actions (M) and the exercise of self-care agency (*IV*) in the population under study?

$H_02_{1:}$ There is not a statistically significant relationship between self-care actions (M) and the exercise of self-care agency (*IV-1*) in the population under study?

$H_a2_{1:}$ There is a statistically significant relationship between self-care actions (M) and the exercise of self-care agency (*IV-1*) in the population under study?

$H_02_{2:}$ There is not a statistically significant relationship between self-care actions (M) the exercise of self-care agency (*IV-1*) in the population under study?

$H_a2_{2:}$ There is a statistically significant relationship between self-care actions (M) and the exercise of self-care agency 2 (*IV-2*) in the population under study?

H_02_3: There is not a statistically significant relationship between self-care actions (M) and the social worker's motivation (*IV-3*) in the population under study.

H_a2_3: There is a statistically significant relationship between self-care actions (M) the social worker's motivation (*IV-3*) in the population under study.

H_02_4: There is not a statistically significant relationship between self-care actions (M) an active versus a passive response to situations (*IV-4*) in the population under study.

H_a2_4: There is a statistically significant relationship between self-care actions (M) an active versus a passive response to situations (*IV-4*) in the population under study.

H_02_5: There is not a statistically significant relationship between self-care actions (M) and the knowledge base of the social worker (*IV-5*) in the population under study.

H_a2_5: There is a statistically significant relationship between self-care actions (M) and

the knowledge base of the social worker (*IV-5*) in the population under study.

H_02_6: There is not a statistically significant relationship between self-care actions (M)

and the social worker's sense of self-worth (*IV-6*) in the population under study.

H_a2_6: There is a statistically significant relationship between self-care actions (M) and

the social worker's sense of self-worth (*IV-6*) and self-care actions.

RQ3: Is there a significant relationship between self-care actions (*M*) and compassion

satisfaction (*DV*) in the population under study?

H_03_1: There is not a statistically significant relationship between self-care actions (*M*)

and compassion satisfaction (*DV-1*) in the population under study.

H_a3_1: There is a statistically significant relationship between self-care actions (*M*) and

compassion satisfaction (*DV-1*) in the population under study (*DV-1*).

RQ4: Is there a statistically significant relationship between the exercise of self-care

agency (*IV*) and compassion satisfaction (*DV*) in the social worker population under

when controlling for the self-care actions (*M*) in the population under study?

H_04_1: There is not a statistically significant relationship between the exercise of self-

care agency (*IV-1*) and compassion satisfaction (*DV-1*) in the social worker

population when controlling for the self-care actions (*M*) in the population under

study?

H_a4_1: There is a statistically significant relationship between the exercise of self-care

agency (*IV-1*) and compassion satisfaction (*DV-1*) in the social worker population

when controlling for the self-care actions (*M*) in the population under study?

H_04_2: There is not a statistically significant relationship between the exercise of self-care agency 2 (*IV-2*) and compassion satisfaction (*DV-1*) in the social worker population when controlling for the self-care actions (*M*) in the population under study?

H_a4_2: There is a statistically significant relationship between the exercise of self-care agency 2 (*IV-2*) and compassion satisfaction (*DV-1*) in the social worker population under when controlling for the self-care actions (*M*) in the population under study?

H_04_3: There is not a statistically significant relationship between motivation/initiative and responsibility (*IV-3*) and compassion satisfaction (*DV-1*) when controlling for self-care actions (*M*) in the population under study.

H_a4_3: There is a significant relationship between Motivation/Initiative and Responsibility (*IV-3*) and compassion satisfaction (*DV-1*) when controlling for self-care actions (*M*) in the population under study.

H_04_4: There is not a statistically significant relationship between an active versus a passive response to situations (*IV-4*) and compassion satisfaction (*DV-1*) when controlling for self-care actions (*M*) in the population under study.

H_a4_4: There is a statistically significant relationship between an active versus a passive response to situations (*IV-4*) and compassion satisfaction (*DV-1*) when controlling for self-care actions (*M*) in the population under study.

H_04_5: There is not a significant relationship between the knowledge and information seeking (*IV-5*) and compassion satisfaction (*DV*) when controlling for self-care actions (*M*) in the population under study.

H_a4_5: There is a significant relationship between knowledge and information seeking (*IV-5*) and compassion satisfaction (*DV*) when controlling for self-care actions (*M*) in the population under study.

H_04_6: There is not a significant relationship self-worth, self-esteem, and self-concept (*IV-6*) and compassion satisfaction (*DV-1*) when controlling for self-care actions (*M*) in the population under study.

H_a4_6: There is a significant relationship between self-worth, self-esteem, and self-concept (*IV-6*) and compassion satisfaction (*DV-1*) when controlling for self-care actions (*M*) in the population under study.

Quantitative research was conducted with moderation regression designed techniques and ANOVAs structured around the informational module seeking to shed light on the relationship between self-care agency and compassion satisfaction. The informational module, *Tools for Trauma: A CBT Approach* focused on knowledge, skills, principles, and techniques of cognitive behavioral therapy (CBT) that could be integrated into the professional's work with survivors of trauma and as self-help that could enhance their repertoire with a specific knowledge in the area of trauma. It was proposed that this informational module could increase the participant's knowledge of theory and could lead to compassion satisfaction. The structure of the informational module allowed for the examination and the practical applications of self-care skills attained. Empirical data was collected through a secured online computer data collecting process that offered anonymity for the participants.

Data Analysis Plan

In this moderation regression designed study I began by focusing on a linear

regression modeling to test the null hypothesis for inference (Hayes, 2013, p. 46),

realizing that in a simple regression model, the standardized regression coefficient was

exactly equal to the Pearson's correlation between the exercise of self-care agency and

compassion satisfaction (p. 39). I began by partialing out the dimensions of the variable

of the Exercise of Self-Care Agency Scale into new, smaller composite variables. When

this was completed, I statistically controlled the new significant composite variables

through regression analyses with the other significant variables considered covariates. In

this method, there was no manipulation of the participants or conditions because I

statistically controlled for the covariates (Darlington & Hayes, 2017, p. 4).

Data Analysis Plan for Part 1

I attempted to answer the research questions through a two-part study where data

gathering was conducted through a randomized pretest/posttest program/control group

design. First, I looked for simple linear relationships between any new composite variable

partialed from the Exercise of Self-Care Agency and the ProQOL Scales. In Part 1 of the

study I decomposed the Exercise of Self-Care Agency Likert scale into smaller composite

scales or variables using exploratory factor analysis.

Exploratory factor analysis (EFA). I used data reduction techniques on the

originally Exercise of Self-Care Agency Scale in order to reduce the individual Likert

items contained in it into smaller sets of composite scales. Specifically, I was looking for

four clusters of items that had strong intercorrelations within the Exercise of Self-Care

Agency Scale. I began with the 43 items on the total Exercise of Self-Care Agency Scale. This was a reliable, validated scale where there are known dimensions or factors in the scale. In the Exercise of Self-Care Agency Scale I was looking specifically for clusters of items that relate to (a) the social worker's motivation, (b) an active versus a passive response to situations, (c) the knowledge base of the social worker, and (d) the social worker's sense of worth (Kearney & Fleischer, 1979). In the ProQOL Scale I already knew the clusters of items that related to compassion satisfaction, burnout, and compassion fatigue, also known as secondary traumatic stress. I measured the reliability of each new scale of the Exercise of Self-Care Agency. To do this, I conducted exploratory factor analysis.

An exploratory factor analysis partialed out the components or factors of the total Exercise of Self-Care Agency Scale. I already knew how many factors (four) were settled on for the final scale of the original Exercise of Self-Care Agency Scale, however, I used the dimension reduction analysis twice, or cycle through the analysis a second time, after dropping poor factors loading and crossloadings of factors for this study. I first used principal axis factoring and then principal component analysis on the Likert items to determine components.

The Exercise of Self-Care Agency Scale reduction process. I used the following process:

- **Analyze**, **dimension reduction**, **factors.**

  - I moved all **43 variables** of this scale to the **Variable** box.

  - First, I went to **Descriptions** and chose **initial solution.**

- o I chose **KMO and Bartlett's test of sphericity**.

- Next, I went to **Extractions** and

  - o I chose **principle axis factoring** the first time through the analysis.

  - o I selected **unrotated factor solution** under **display** the first time through the analysis.

- I also selected **Scree plot**.

- I then examined the **output**.

- I looked at the **KMO** value seeking a value of at least .6.

  - o I checked the **Bartlett's value** for significance. There was significant, and I continued extracting components or variables.

  - o Next, I examined the **Total Variance Explained** box for initial eigenvalues and extraction loadings.

  - o I looked at the values of **1 or more**.

  - o I also looked at the **Scree plot** for the number of **components of factors**.

  - o I went to **Analyze**, **Dimension reduction**, **Factors**

  - o **Rotate, Promax,** and selected **Rotated solution.**

  - o Went to **Options**, and selected **Sorted by size** and selected **Suppress small coefficients.**

  - o For **Absolute value I put 0.3.**

  - o Selected **OK** and examined the **Pattern Matrix** for the loadings**.**

  - o In the **Pattern Matrix,** determined factors that could be dropped if there were too few.

- o Went to **Analyze**, **Dimension reduction**, **Factors**

- o Went to **Extractions** and deselected **unrotated factor solution** and **Scree plot.**

- o Under **Extractions** selected **fixed number of factors** and in the **Factors to extract** placed the number **4.**

- o Clicked **OK** and looked at **Output.**

- If I came up with poor factors I would drop them and then re-rotate again (re-estimate).

- (I *rotated* to get a sharper distinction between factors.)

- Looked at **Pattern Matrix** again for crossloadings of individual items.

    Did last check in Dimension reduction.

    Went to **Analyze**, **Dimension reduction**, **Factor**

    - This time, went to **Rotate** and selected **Varimax** and selected display **rotated solution.**

    - Went to **Options** and selected **Sort by size.**

        - o **Suppressed small coefficients**

        - o **Absolute value 0.3.**

- Went to **Extraction** and now selected **Principal Component Analysis** and made sure **to** Deselect **unrotated factor solution**.

- Deselected **Scree plot.**

- Clicked **fixed number of factors** (factors to extract). In this first case put the **number 4**.

- Went to **Scores**

  - o **Saved as variables**

  - o Selected **Regression** where the **mean value** will be **0.**

- **SPSS** created the additional factors in the **Variable View** with the **scores.**

  Determining alpha levels of composite scores of new individual scales:

Reliability check.

- Went to **Analyze, Scale**, **Reliability.**

- Picked questions that loaded on **Factor 1**.

- Clicked **Statistics.**

- Checked the **Scale if deleted** box.

- **Clicked Continue, OK.**

- Looked at output **Reliability Statistic.**

- Was it above .7? If not, I would look at items suggested for deletion and remove them

  for a higher alpha. I did this step to all the newly determined scales this identical way.

  After the dimensions or factors of these new scales had been determined, and I

  checked the reliability of each the newly divided dimension or factor using Pearson's

  r. I ran covariance and bivariate correlations on the scales using both a Spearman rho

  and a Pearson correlation.

  Descriptive statistics for new variables. I used SPSS to display descriptive statistics

on all variables that were used in the analyses. To summarize the variables scales, I used

SPSS to compute the following statistical indices that were used gathered to analyze the

data (Green & Salkind, 2011, p. 147): mean, sum, standard deviation, variance, standard

error of the mean. I used these statistics to determine covariance and correlation while using the formula for covariance as a guide.

Covariance: Calculating covariance using SPSS.

- I selected the statistical indices mentioned above to gain the output.

- Went to **Analyze**, **Descriptive Statistics**, **Descriptive.**

- Moved over all of variables at a time.

- Went to **Options.**

- Selected **mean, sum, standard deviation, variance, and standard error of the mean** and clicked **OK.**

- Checked the box for **Save standardized values as variables** and **OK** for output.

I used these values to help evaluate covariance. I was looking for a positive numeric value in the covariance value in order to retain the variable and to draw the conclusion that there was a linear relationship.

Part 1 of the study focused of examining the data for a linear relationship between the independent variables and the dependent variable. I used G*Power 3.1 to determine the minimum sample size for this study, or to determine how many participants I must have to assess results, effect, and relationship, I will use the G*Power (Laureate Education, Inc., 2009b), a power analysis program software, to assist in the calculations. The G*Power program provided effect size calculators and offered five different types of statistical power analysis, one of which was a priori, which was used in this study (G*Power 3.1 Manual, 2014).

Compute sample size. The acceptable power value that I sought was .80 or 80%

and a proposed alpha level was .05. The rationale for this measure was that this was an a

priori entry, and therefore the effect size was set a medium and the sample size helped

answer the research questions with the specified level of confidence (Laureate Education,

Inc., 2009a). The a priori condition was the justification of the chosen effect size.

For this study, a sample size of 92 participants was needed when requesting a

medium effect size of .15, an alpha level of .05, power level of .80, and predictors

totaling 5. However, the study was conducted with 46 participants. Although this study

provided me with information on the ProQOLs three dependent subconstructs:

compassion fatigue, compassion satisfaction, and burnout, the dependent variable,

compassion satisfaction, was the main outcome variable under study. And, this study also

has four main independent or predictor variables: (a) the individual's motivation, (b) an

active versus a passive response to situations; (c) the knowledge base of the individual;

and (d) the individual's sense of self-worth (Kearney & Fleischer, 1979, pp. 26-27). The

interaction variable, self-care actions, was also treated as a predictor in this study. This

information was used a priori from the output of the G*power software and its *F* tests of

Linear multiple regression: Fixed model, R^2 deviation from zero.

Options when hand cleaning the data in regression analysis. Data cleaning and

screening was performed at both points of data collection: Part 1 and Part 2. I realized

that there were assumptions to be met when using linear and multiple regression methods

of data analyses. One of the assumptions of multiple regressions was that independent

variables were not too highly correlated, or not perfectly correlated. The literature review

informed me that when variables are highly correlated with an *r* - value higher than .9, it is known as multicollinearity; and if they are perfectly correlated, it is known as singularity. In this study I observed the *r*-value in the Model Summary with the predictors to see that these values do not exceeded .9. This was one method that I used in Chapter 4.

When looking at the Durbin-Watson score, the lower cutoff point was 1.00 with this cutoff point, I could assume the residuals in this example were independent. This score tested whether adjacent residuals were correlated. The statistic could vary from 0 to 4, with the value of 2 meaning that the residual are uncorrelated. "A value greater than 2 indicates a negative correlation between adjacent residuals, whereas a value below 2 indicates positive correlation. The rule of thumb is that values less than 1 or greater than 3 are problematic; however, values closer to 2 may still be problematic, depending on the sample and the model" (Field, 2013, p. 311). I observed to see if the Durbin-Watson value of this multiple regressions fell within the range of acceptable correlation.

The Shapiro-Wilk's Tests of Normality was observed to see if the values were significant at the .05 level and were normally distributed. I also checked for skewness. When looking at skewness and kurtosis values, I realized that that the values should be somewhere between the span of -1.96 and +1.96 (Löfgren, 2013), or -2.00 and +2.00 (Laureate Education, Inc. (Executive Producers), 2009b). I could divide the measure by its standard error to arrive at skewness and kurtosis values (Löfgren, 2013).

When there was a value higher than the absolute value of 2.00 it meant that the assumption of normality had been violated. If, after dealing with outliers, there was still

non-normality, I could transform the non-normal variables to make them more normal

(Laureate Education, Inc. (Executive Producers), 2009b). I could also take the logarithm,

square root, or inverse of that variable and each of these could easily be done using the

compute function in SPSS to reduce the non-normality of the dependent variable.

To check for normality of variables I visually looked at the histograms of the

variables to see if the variables were normally distributed. If they were, the distributed

scores took the shape of a bell shaped curve (Laureate Education, Inc. (Executive

Producers), 2009b). This reduced the non-normality of the dependent variable. I used

parametric statistics instead of non-parametric equivalents (Laureate Education, Inc.

(Executive Producers), 2009b). I used the histogram check of normality in Chapter 4.

I checked for collinearity. One of the assumptions of multiple regression is that

the independent variables are not highly correlated or perfectly correlated. If they are

highly correlated with an *r* higher than .9, this is known as multicollinearity. If they are

perfectly correlated with an *r* of 1.00, this is known as singularity. One way to determine

a violation of this assumption is to scan the correlation matrix and look at the predictor

variables to see if any values have a correlation higher than .9, which is "a good ballpark

method" (Field, 2013, p. 225). For this study, I determined if any values exceed this limit.

When looking at the Variance Inflation Factor *(VIF),* "this value indicates

whether a predictor has a strong linear relationship with the other predictors" (Field,

2013, p. 225). If the tolerance value was below .1 this indicated a serious problem" (p.

225). If I had a *VIF* greater than 10, there was cause for concern (p. 225). In order to fix

multicollinearity

- I could delete any of the variable pairs, or just one of those variables that are too highly correlated from this analysis, and this was a conservative approach.

- I could also combine the variable pairs into one variable and use that new variable in the analysis.

- I could create a combined variable where I would add the two highly correlated variables and create an average score for that, and then use that average scores as an independent variable in that multiple regression. (Laureate Education, Inc. (Executive Producers), 2009b).

The Mahalanobis distances values were examined. These values told me how much the value of a case differed in the independent variable from the average of all the other cases. Outliers are scores of the variables that are extreme in value, either greatly higher or lower than all the other scores for that variable. It is commonly stated that outliers are any values which have standardized scores in excess of the absolute value of 3.29, which is either positive or negative 3.29 for that variable…a score more than three standard deviations from the mean (Laureate Education, Inc. (Executive Producers), 2009b).

I realized that outliers could lead to both type 1 and type 2 error, thereby making the solution unreliable (Laureate Education, Inc. (Executive Producers), 2009b). A large Mahalanobis value signified potential outliers. To fix the outliers, I could delete the outliers from the variables, but this reduces the sample size and it's not recommended (Laureate Education, Inc. (Executive Producers), 2009b); or I could transform the variables. I could multiply the variable by its logarithm, square root or inverse. But, this

makes the variable more difficult to interpret (Laureate Education, Inc. (Executive

Producers), 2009b). I transformed the variables as seen in Chapter 4.

It was recommended that I modify the outlier so it's not as extreme. This was

done by me. The modification is sometimes this is called windsorizing (Laureate

Education, Inc. (Executive Producers), 2009b). I made the outliers for a variable one unit

larger or smaller than the next most extreme score. I found the value whose standardized

score was closest to the absolute value of 3.29 without going over that and then add one

to that value. This value would now be used to replace the outliers for that variable. For

example, if I had a few outliers for a particular variable and found that the value at 3

standard deviations above the mean was the value, I would take that value and add 1 to it,

and use that value to replace any missing values- any outlying values I had in the

particular dataset (Laureate Education, Inc. (Executive Producers), 2009b, pp. 4-5). The

Cook's statistics gave me an indication of extreme values in the data. It was suggested

that values greater that 1.00 be scrutinized and perhaps be removed. I also performed data

cleaning analysis using the SPSS software program and statistical analysis on the

returned data. This was the cleaning analysis that I used, while keeping the option for

hand cleaning as an option.

Computer assisted data cleaning. I checked the assumption of multicollinearity.

I checked each assumption separately for violations through the use of the incorporated

computer programs SPSS and PROCESS. The check was done before the data analysis

began. I used computer software to accurately check this assumption. I used the SPSS

statistical program with the PROCESS macro the check the assumption allowing me to

center the variables under investigation as zero which was mathematically useful

throughout the duration of the data analysis.

Because I was using a form of linear regression called moderation regression,

there were special concerns that needed to be addressed. I would be using all the

predictors, the outcome variable, and the interaction variable, and I would be multiplying

separate columns of data to create a total score. This tended to create a multicollinearity

problem with the data (Buchanan, 2015) because the columns are no longer unique

(Buchanan, 2015). This was corrected by centering the variables, which puts the mean of

the variables at zero and created a standard deviation of 1, where the integrated computer

programs would subtract the mean from every score (Buchanan, 2015). When I centered

the variables, this solved the problem of multicollinearity, and helped when I created

accurate simple slopes in the data analysis (Buchanan, 2015).

Check for missing data and accuracy in descriptive statistics. With the

integrated computer programs, I examined the Descriptive Statistics. For the purpose of

this particular examination, I set the variable to scale in the 'variable view' of the data. I

Chose: **1) Analyze, 2) Descriptive Statistics,** 3) then the **Frequencies** dropdown boxes.

In the Frequencies Statistics box I checked **Mean, Standard Deviation** (SD), **Minimum**

and **Maximum**, and took off the selection of the **Frequency tables**. This selection of

options gave a Statistics output where I checked the minimum and maximum range of

data and for missing data. I checked to see if the variables were within the ranges that

were expected, and I looked at means and standard deviations for correctness. Thus, I

performed an accuracy check on the information provided.

Check for outliers. To check for outliers using the integrated computer programs for homogeneity, and homoscedasity problems (Buchanan, 2015), I went to: 1) **Analyze, 2) Regression, 3) and Linear**. I placed the variables in the correct slots for dependent and independent variables. Next, I chose the **Plot** option. Under the **Plot** option the research put **ZPRED** in the *Y* box and **ZRESID** in the *X* box. Under **Standard Residual Plots**, I checked **Histogram** and **Normal probability plot**, click *OK,* and I moved back to the landing page. I clicked **Save.** Another option box appeared. The research chose from the **Distances** options: I chose **Mahalanobis**, **Cook's**, and **Leverage** values; clicked **Continue**, and then *OK*. Three new columns were created in my dataset: **Mah_1**, **Coo_1** and **Lev_1**.

In the output chart I worked on outliers first. I used three methods to check for outliers: Mahalanobis, Cook's, and Leverage. For the Mahalanobis method, I used the Chi Square formula for the check. X^2 *df* = <u>the value from the chi square table</u>, p < .001. Using a Chi Square Table, I found the cutoff score for Mahalanobis. On the ANOVA table I used the degrees of freedom (*df*) of the dependent variable provided in the table, plus a *p* value of .001, to find the cutoff value. This was the value to look for when variables were recoded. I wrote Mahalanobis value = and the cutoff score found on a separate piece of paper for reference to ensure the value was the same throughout the analysis when called for.

For the Cook's method, I used a formula: $\frac{4}{N-K-1}$. *N* was the number of participants, and *K* was the number of predictors (this was the value that I put into the box that called for the independent variables earlier) (Buchanan, 2015). I solved for the

formula. This number was the cutoff for the Cook's value. I wrote write Cook's = <u>the</u>
<u>value found</u>, on the paper with the Mahalanobis cutoff.

For the Leverage value, I also had a formula: $\frac{2\,(K)+2}{N}$. I solved the formula which
yielded the Leverage value. I wrote the value on the paper with both the Mahalanobis and
the Cook's value for reference.

Transform and recode into different variables. This process made it easier for
me to check multiple variables (Buchanan, 2015). I worked with each method for
discovering outliers separately, and then I looked for outliers in the total outlier score.
Buchanan (2015) suggested that if a participant has outliers in at least two columns, I
should consider eliminating that participant's scores from the data.

I used the integrated computer programs to examine the data. I transformed data
where the integrated computer programs would focus only the independent and
dependent variables to screen for outliers.

I chose: 1) **Transform**, 2) **Recode into different variables**. In the popup box I conduct
the following actions:

1. In the **Numeric Variable – Output Variable** box first put **Mah_1**.

2. In the **Output Variable** box, put **out_Mah**. Clicked **Change**.

3. Next, clicked **Old and new Values**. There was a popup box.

4. Under **Old Value**, Selected **Range**, **value through the HIGHEST**. Placed the
   Mahalanobis value that was found in the box.

5. Under **New Value**, placed a **1**. This allowed all scores higher than the designated
   value to be coded as **1** indicating that it was an outlier.

6. Clicked **Add**.

7. Checked the box **All other values**.

8. Under **New Values** placed a **0**.

9. Clicked **Add**.

10. Clicked **Continue**.

11. Clicked **OK**.

What these actions did was to create a new column called out_Mah. Now every participant who had a score above the designated Mahalanobis value that I found would be coded with 1. This showed the Mahalanobis outliers. I hit **Reset** on the **Recode into different variables** popup page and did the same process for Cook's and Leverage, looking for participants coded 1. Cook's distance measured the influence the Leverage values had an influence on the slope (Buchanan, 2015). I had three individual methods of checking for outliers.

I looked at the outliers as a total. I went to 1) **Transform**, and 2) **Compute.** Next:

1. In the **Target Variable** box name the variable **out_tot**. I took the three new columns **out_Mah +out_cook, + out_lev** and added each to the **Numeric Expression** box.

2. Clicked **OK**.

This new column added to the dataset gave me an idea of how many times a participant's scores were marked as an outlier. I went to:

1. **Sort**.

2. Placed **out_tot** in the **Sort** by dialogue box.

3. Clicked **Descending**.

4. Clicked **OK**.

I checked outlier for the 1's value. I would make decisions about eliminating or keeping the score, giving a justification for doing either. I used this criterion of two or more problems with scores of 1 for participant elimination (Buchanan, 2015).

Examine the Coefficient Table for multicollinearity. I could check for multicollinearity in this table. This was related to power. If the variables were too highly correlated, they tended to suppress each other (Buchanan, 2015). I:

1. Chose **Analyze**.

2. Chose **Bivariate**.

3. I moved just the IVs into the **Variable** dialogue box.

4. Under **Correlation Coefficient**, **Pearson was chosen**.

5. Under **Test of Significance, two-tailed** was chosen.

6. **Flag** significant correlations.

7. Chose **OK**.

I did not have the interaction at this point, but the interaction would create multicollinearity. The integrated computer programs would solve this violation by centering the variables. I observed the data making sure the correlations were not .9.

Examine the histogram for normality. The combined computer programs, SPSS and PROCESS produced charts for me to examine to check if assumptions were met. I examined the histogram for normality of the dependent variable. The Regression

Standardized Residual was observed to make sure that the bell curve was centered over zero. I checked for linearity.

Check for linearity. Looking at the P- P Plot of Regression Residual of the dependent variable, I observed to see if most of the dots were close to the line.

Examine the Residual Scatter Plot for homogeneity and homoscadascity. Looking at the X and the Y axis, I observed to see if the dots appeared to be centered on zero. If there was homoscadascity, I could install the HCREG program macro developed by Hayes to make statistical adjustments (Crowson, 2015). After cleaning the data and running the assumptions, I now proceeded to statistically run the participant data using regression techniques.

Moderation regression analysis. I ran a moderation regression analysis using the integrated computer programs of SPSS Version 23 and PROCESS Version 2.16. I used 1) **Analyze**, 2) **Regression**, and 3) **PROCESS** by Hayes. A popup box appeared where I used the listed data file variables in the correct box. I placed the **Outcome Variable (*Y*)** into its designated dialogue box; the **Independent Variable (*X*)** into its designated variable box and the **(*M*) Variable** into its designated box.

1. I chose **Model 1** for the **Model Number** interaction.

2. I bootstrapped for indirect effects choosing **1000 bootstrapping samples.**

3. I also chose the **Bias Centered Method**.

4. The Bootstrap Confidence Interval (*CI*) was **95%**.

5. The **Covariate model** of both *M* and *Y* was chosen.

6. For this study, I also used the **Covariate** dialogue box to control for multiple covariates in this analysis in this model. I had four divisions of the independent variable self-care agency that were examined calculated and analyzed as focal predictors. They were discussed individually as well. The **Covariate** dialogue box controlled the other covariates.

I chose the **Options** button. I chose

1. **Mean center** for product.

2. **Heteroscedasticity** – consistent standard errors (SEs).

3. **OLS/ML confidence intervals**.

4. Generate data for plotting (model 1).

5. Clicked **Continue**.

I selected the **Conditioning** button. I chose

1. **Pick-a-Point**, **mean and +\- a SD from Mean**.

2. Choose **Johnson-Neyman (Model 1)**.

3. Clicked **Continue**.

I observed the data output page.

Examine the Model Summary. First, the output showed me what variables were used. Next, I was presented with a Model Summary. This Model Summary was very similar the coefficient box in the Model Summary of a multiple linear regression (Buchanan, 2015). When observing the Model Summary, I discussed the overall significance. I used a formula for the overall model: $f(df1, df2)$ = <u>place the f value from the table summary</u>, p <u>the value in the Model Summary</u>, R^2 = <u>place the R^2 value from the</u>

<u>Model Summary</u>. This informed me of the significance or nonsignificance of the overall model. Using the R^2 value, I examined the amount of variance due to the five predictors. In the Model Summary, I also examined the Confidence Intervals (*CI*s). If *CI*s beta value range did not include 0, then there was significance (Field, 2013). If zero was between the confidence interval, there was not significance (Tewari, 2017).

Examine the Model. In the model, I was presented with the constant measure, followed by the measures of the variables, and an interaction measure. I was able to answer questions pertaining to the research questions and hypotheses and their significance.

I used the *t* score and the *p value* in the model to discuss significance where the coefficient was the *b* value. The formula was: *b* = <u>(coeff value for the target variable)</u>, *t* <u>(place the overall *df* for the model)</u> = <u>place the *df* for this target variable</u>, *p* <u>(place the *p* value of the target variable)</u>. Using this formula, I determined the significance of each of the listed variables and of the interaction effect. These conclusions were a direct interpretation of the interaction in this model; therefore, additional analysis had to be conducted (Buchanan, 2015). I now looked for the conditional effects.

Examine the conditional effect of X on Y at the value of the moderator. In the conditional effects, I interpreted the interaction (Buchanan, 2015). The integrated computer programs produced values that showed the mean and plus or minus one SD from the mean for the data provided. I was be given low, average, and high conditional effect on the variables *X* on *Y*, or self-care agency on compassion satisfaction. The conditional effects could be considered a kind of post hoc for interactions called the

simple slopes (Buchanan, 2015). I conceptualized this effect as slopes for *X* predicting *Y*

at each level of *M* (Buchanan, 2015), or the slopes for self-care agency predicting

compassion satisfaction at each level of self-care actions. In the chart, the Effect was the

slope for self-care agency (*b*). The moderator level at plus or minus one standard

deviation for the mean was in the column to the left of the Effects column. I paid close

attention to the *t* values and *p* values in this chart to make decisions about significance.

The statistical examinations were mean centered. I examined the slope using the low, or

one standard deviation below the mean; the slope for average or the mean of zero; and the

slope for high, or one standard deviation above the mean.

I discussed and reported each slope separately, discussing the results in terms of *t*

scores and *p* values in the chart; and I discussed confidence intervals and significance.

The formula was: *b* = (Effect value for the focal variable), *t* (place the overall *df* for the

model) = (place the *t* value of this focal variable), *p* (place the *p* value of the focal

variable), and it was used in this analysis to determine the significance.

Examine the Johnson-Neyman data. Looking at the Moderator, I examined the

significance region of the conditional effect of *X* on *Y* (Buchanan, 2015) called the

regions of significance as it related to the dataset of this study. This technique found the

exact point in the data where the relationship between the variables was exactly .05

(Buchanan, 2015) and the region above it - the regions of significance. The bottom most

number and the top most number in the table were considered the upper bound and lower

bound of the data (Buchanan, 2015). I could also observe the percent of the data above

the 95% value and the percent data below the 95% value. Examining this data gave me an

idea the direction and strength of the interaction and where the moderation actually began

to happen. The graphed lines of the data depicted the low, average, and high values in the

conditional effects. I used the data from the conditional effect produced by the integrated

programs to create a line graph with multiple lines in SPSS.

Graph the Simple Slopes of interaction. The integrated programs, SPSS and

PROCESS, produced data that could be used to chart the conditional effects of the data

(Buchanan, 2015). I presented the visual data as a line graph.

1. I created a new SPSS dataset.

2. I went to **Variable** view.

3. In the first row I typed in the variables understudy.

    I went to the **Labels** column and label the variables as to be seen on the final

    chart.

4. I went to the **Values** column and Clicked. In the **Value** box.

    a. I inserted the value_**-1**; labeled it low; and click **Add**.

    b. I inserted the value_**0**; labeled it average; and clicked **Add**.

    c. I insert the value_**1**; labeled it high; and clicked **Add**.

    d. I clicked **OK**. I did this process for all of you numeric variables.

5. At the bottom of the page, clicked the **Data** view.

    a. Using at the data from the first column on the output for Data for

       visualizing conditional effect of X of Y, every time the value was negative

       in the data presented, I would type it in as **-1** in the data view of SPSS

       under the same variable.

b. Every time the value was listed as **0**, I would type **0**.

c. And every time the value was positive, I would type **+1**.

6. For the moderator variable, the values were listed in the order of 1 SD below the mean, the mean, and 1 SD above the mean. The values typed simulated the following: -1, -1, -1, 0, 0, 0, +1, +1, +1; or low, low, low; average, average, average; high, high, high.

7. For the dependent variable, I typed in the predicted values from the output into the SPSS designated column.

8. I now had the data for the *X, M* and *Y* lines in SPSS to be charted as a new dataset.

9. I went to variable view and changed one of the variables to **Scale**. The program would not run otherwise. I made sure the measures were listed as nominal, nominal, and scale. I made the dependent variable compassion satisfaction the scale measure. The rational for this change in measure was that I could use a cluster line graph and one of the measures had to be scale in order to produce the graph.

10. Next, I went to **Graphs** and then **Chart Builder**.

11. Under **Choose from**, I clicked **Line**, then chose the figure with multiple lines.

12. I dragged the *X* variable to *X* axis; dragged the moderator variable to **Set color**; and the *Y* variable to the *Y* axis.

13. I hit **OK** to produce the output chart.

First I checked to see that the lines were straight.

To explain the number of independent variables used in this study, I referred reader to the measurement instruments used in this study which are considered validated questionnaires. And, as discussed in previous chapters, important to this study was the constraint that if the questionnaire has subscales or subfactors, alpha should be applied separately to these subscales (Field, 2013, p. 709), allowing me to treat each division as a predictor variables, a focal predictor, or covariates. This was the rationale for the use of multiple predictors, or covariates, in this study is that the covariates are divisions of the single independent variable of self-care agency. Therefore, each division of self-care agency was used separately as a focal predictor or independent variable and this analysis contained multiple predictor variables or independent variables.

Data Analysis for Part 2

It was proposed that:

- A moderator implies an interaction effect, where introducing a moderating variable changes the direction or magnitude of the relationship between two variables (Elite Research, LLC, 2004).

- The causal relationship between two variables change as a function of the moderating variable (Barron & Kenny, 1986, p. 1174).

- Statistical analysis must measure and test the differential effect of the independent variable on the dependent variable as a function of the moderator (p. 1174).

A review of the literature revealed that a moderation regression analysis would measure the causal relationship between the exercise of self-care agency and compassion

satisfaction by using regression coefficients (Kenny, 2015); and the regression coefficient of the exercise of self-care agency generated by compassion satisfaction "quantifies how much two cases differ by one unit (p. 53) [where] self-care agency was estimated to differ on compassion satisfaction" (p. 53).

To further "determine whether a certain variable influences or was related to the size of one variable's effect on another" (Hayes, 2013, p. 207) I used repeated measures ANOVAs and paired samples t tests analyses where I compared the means of two groups. I had access to a continuous measure, and measured if any statistically significant changes in responses occurred between two data collection sessions, where I was evaluating the variance that made up the means.

Repeated measures ANOVA and paired samples t tests. The second data collection session focused on quantitative measures using t tests and t-scores where I compared two means in each analysis (Nishishiba, et al., 2014). (a) I conducted repeated measures ANOVAs of the dimensions of the predictor variable, the exercise of self-care agency, and the dependent variable of compassion satisfaction. Here, I compared data from the program group and the control group data where the data were considered related. (b) I also used paired-samples t tests to compare the means using the pretest and posttest scores (Nishishiba, et al., 2014) where each variable had been measured twice looking for a statistically significant variance.

Deliberate self-care actions, the moderating variable, was measured by the introduction of an informational module to the program group. The control group did not receive the informational module until after the end of the study. I examined and

discussed the group data in the context of linear regression of the variables first, to examine the participants' perception of the quality of the variables of the scale items as they relates to them. Next, I used the repeated measures ANOVA to determine whether a difference occurs between the means of the related samples of the independent variables and the dependent variable examining the affect of the moderating variable. I also discussed the Familywise error rates related to the analyses. I believed that a sample size 20 participants was adequate to conduct both the repeated measures ANOVA and paired samples *t* tests and a moderation regression analysis. However, I was aware that the observed power level may not reach the .80 level with the small sample size.

In the paired samples *t* tests, the analysis followed the repeated measures ANOVA design where data was collected twice on one related variable (Nishishiba, et al., 2014). This was also considered a within-subject design where each participant generated two scores (Wuensch, 2016). (a) A repeated measures ANOVA analysis also allowed me to detect a within-subject change over time; (b) these types of measures "typically have higher statistical power than cross-sectional designs" (Guo, Logan, Glueck, &Muller, 2013, p. 1) and (c) repeated measurements from the same participant were correlated (p. 1). In the series of repeated measures ANOVA, the dependent variable became the variable in question and the independent variable became a dichotomous variable surrounding the informational module with the program group versus the control group and the pretest versus the posttest.

In this part of the study I sought to further examine if a significant change could be observed from baseline scores, with the introduction of a moderating variable, the

informational module, before the second data collection session. The design put forth that

the introduction of an informational module, in the form of deliberate self-care actions,

could affect the variance between the pretest and the posttest sample data of and could be

observed through analyses using repeated measures ANOVA and paired samples *t* tests. I

also used bootstrapping of the sample means to envision the path of the data.

Data Analysis Plan Part 2: Using Repeated Measures ANOVA and Paired Samples

T Tests

I used analyses that compare two means to examine if a significant difference had

taken place between means (Nishishiba, et al., 2014). I realized that the Levene's test

allowed the reporting of the correct statistic for the *t* test. If the *p* value was above .05

there was a failure to reject the null hypothesis; or there was a significant difference in

mean change (Nishishiba, et al., 2014, p. 15). If the difference between the mean was not

statistically significant then there could not be generalization. If I was able to reject the

null hypothesis with significance below .05, there was a significant difference in the

mean change and I could conclude that scores were greater in the posttest measures (p.

15).

If the result of the Levene's test was significant, the conclusion could be drawn

that there was a statistically significant difference in the population variance between the

two groups, and the assumption of homogeneity of variance had been violated. The *t*-

value could be obtained for the adjusted unequal variance between the two groups

through SPSS. If the result of the Levene's test was not significant, then the assumption

of homogeneity of variance was met, and could be reported as an unadjusted *t*-value

(Nishishiba, et al., 2014, p. 3).

Paired samples *t* tests. For this within-subject *t*, related samples, repeated measures,

or correlated samples design (Wuensch, 2016, p. 2), there were pre-post condition

analyses. With the program group, I examined the data from the same participants in pre-

post conditions with the addition of the informational module occurring between data

collection sessions. For the control group, I examined the data in a pre-post condition

without the introduction of the informational module. An examination of the data from

control group helped control for the effect of time or test-retest effects when focusing on

internal validity. And, this control group assisted in test-retest reliability of the new

composite scales. I was looking for a significant difference between means. I kept in

mind the following measures:

- The null hypothesis was that $\mu_{1 = }\mu_2.$ With the alternative hypothesis as ($\mu_1 \# \mu_2.$), or

  the null hypothesis was: H_0: $U_D = U_1 - U_2 = 0$ (Social Science Statistics, 2018, p.

  1).

  For each pair I computed the difference: $D = Y_1 - Y_2$ (Wuensch, 2016, p. 1), or

the hypothesis was: H_0: $U_D = U_1 - U_2 = 0$ (Social Science Statistics, 2018, p. 1). I took

the difference of the two means and divided the standard error of the mean for the

difference scores (Wuensch, 2016, p. 2). Then the analysis followed a one mean

hypothesis (Wuensch, 2016, p. 1). The confidence interval was now the difference in

means plus/minus the critical value of *t* times the standard error (Wuensch, 2016, p. 3). If

the value exceeded the critical value, the conclusion was that the difference between the means was statistically greater (Wuensch, 2016, p. 3).

Assumptions of paired samples *t* tests. I compared the means of two groups that were matched by design where one group was measured twice (p. 6). This test was also referred to as a repeated measures *t*- test. The assumptions of the paired samples *t* test were that:

1. The variables from which the mean was to be calculated must be a continuous measure.

2. The independent variable was a pair of two conditions that represent data.

3. The difference score in the dependent variable between the two conditions must be normally distributed in the population (Nishishiba, et al., 2014, p. 18).

To begin the analysis

- I went to **Analyze**, **Compare Means**, **Paired-Samples *T* Test.**

- I selected the variable to be compared (pre and post measure).

- I selected **Bootstrapping.**

- I selected **Options.**

I was comparing two means for a single group, the Group A program group pre-post, and the Group B the control group pre-post. With bootstrapping, I was examining the difference between the sample means (Curran-Everett, 2017, p. 1). In Part 2 I was answering two research questions:

- RQ2 – Quantitative: Is there a statistically significant relationship between self-care actions and the exercise of self-care agency in the population under study?

- RQ3-Quantitative: Is there a significant relationship between self-care actions and compassion satisfaction in the population under study?

(The statistically significant relationship being a statistically significant variance in the two means for RQ2 and RQ3.)

Moderation regression analysis. For the moderation regression analysis between the predictor variable and the dependent variable, the research question was:

- RQ4-Quantitative: Is there a significant relationship between the exercise of self-care agency and compassion satisfaction when controlling for self-care actions in the population under study?

I ran a moderation regression analysis using the integrated computer programs of SPSS Version 23 and PROCESS Version 2.16 as discussed earlier. I used 1) **Analyze**, 2) **Regression**, and 3) **PROCESS**, by Hayes. A popup box appeared where I used the listed data file variables in the correct boxed. I placed the **Outcome Variable** (*Y*) into its designated dialogue box; the **Independent Variable** *X* into its designated variable box and the (*M*) **Variable** into its designated box.

7. I chose **Model 1** for the **Model Number** interaction.

8. I bootstrapped for indirect effects choosing 1000 bootstrapping samples.

9. I also chose the **Bias Centered Method**.

10. The **Bootstrap Confidence Interval (*CI*)** will be **95%.**

11. The **Covariate model** of both *M* **and** *Y* were chosen.

- I observed the **Data Output page**.

- I examined the **Model Summary.**

- I examined the **Model.**

- I examined the **Conditional Effect of X on Y at the Value of the Moderator.**

- I examined the **Johnson-Neyman Data.**

- I graphed the **Simple Slopes of Interaction.**

Threats to Validity

When referring to sources of internal validity in the pretest-posttest control group design, Campbell and Stanley (1963) explained that this design controls for the extraneous variables of history, maturation, testing, instrumentation, regression, mortality, interaction of selection and maturation, which center on internal validity; or that this design controls for all of the seven of the rival hypotheses (p. 7). Creswell (2009) relayed internal validity pertains to the experimental procedures used in the study, the treatments, and the experiences of the participants (p. 162). And, I realized that if certain aspects of a study were not controlled, my "ability to draw correct inferences from the data about the population under study" (p. 162) would be threatened.

With instrumentation, Patton (2002) proposed that "validity in quantitative research depends on careful instrument construction to ensure that the instrument measures what is supposed to measure…where the instrument is administered in an appropriate, standardized manner according to prescribed procedures" (p. 14). Additionally, Wuensch (2013) relayed that the Cronbach's alpha is "a statistic that measures the degree of internal consistency among items on a scale … [and] it can be

used to estimate the reliability of the instrument" (para 1). A review of the literature had shown that both the Exercise of Self-Care Agency Scale and the ProQOL Scale are validated measurement instruments. The administration of these instruments in this study were also be controlled by using an online format for administration where all participants would have the same administration experience.

Interaction of testing. A threat to the external validity of this study was a reactive or interaction of testing (Campbell & Stanley, 1963). It was proposed that a pretest could increase the sensitivity or responsiveness to questions about self-care agency and compassion satisfaction, or the participant's attitude or susceptibility to persuasion could changed by a pretest (Campbell & Stanley, 1963). I chose to use the pretest – posttest control group design and to manipulate the time interval between the administration of the pretest and posttest as a method of control. I believed that allowing at least a 45-day interval between the pretest and the posttest could help control the interaction of testing as an extraneous variable and reduce possible sensitizing of both the control and the program groups.

Reactive arrangement. Another possible threat to the external validity of this study stems from a reactive arrangement. The threat to external validity would be the arrangement of the experimental setting and the ability to generalize about the effect of self-care agency and compassion satisfaction to persons being exposed in nonexperimental settings (Campbell & Stanley, 1963). To control for this effect during the experiment, I incorporated the continuing of the normal work routine for all the participants in the study to address this concern.

Random selection and random assignment. Interaction of selection could be another possible threat to the external validity of this study, but the literature of Campbell and Stanley (1963) relayed that random assignment could control for this threat. Additionally, I had to limit discussing the findings to the population described in the study. The work of Trochim (2006) proposed that external validity could be improved by focusing on the sampling model and ensuring that drawing the sample was well designed. Therefore, to improve external validity in this study, I randomized the study using random selection of participants and random assignment to both the control and the program group.

Trochim (2008) suggested that external validity is related to the ability to generalize the findings of a study to other persons and other places or settings and provided me with two methods to consider. First, I could examine the potential sample model (p.1). Since the sample was drawn from a representative sample of professional social workers with a master's degree or higher, I could automatically generalize to that group or population (p. 1). However, "because of the narrow characteristics of participants in the study's [selection strata] I would not be able to generalize to individuals who did not have the same characteristics of participants" (Cooper et al., 2007, p. 164). Therefore, in this study, I limited claims to the groups from which the participants originated: a roster of professional master's level or higher social workers in a particular state. A review of the literature suggested that for future generalizations to other groups, a researcher would need to conduct additional experiments with groups

with different characteristics (p. 164). However, Trochim (2008) introduced a possible alternative.

The second approach discussed by Trochim (2008) dealt with the ability to generalize using a proximal similarity model. Trochim (2008) suggested this model as a second approach to generalizing the results of this study. It was suggested that I might want to design a proximal similarity model where I would consider different generalizable contexts from the population under study and develop theories about which contexts were more like the study at hand, and which were less (p. 1). Placing different context in terms of similarity to the participants gave me an 'implicit theoretical gradient of similarity' (p. 1). From this proximal similarity framework, I was able to generalize to other persons, and settings that were more proximally similar to the participants in this study, discussing whether the person or setting was more or less similar (p. 1). I was able to discuss the findings of the study in terms of populations being more similar to the population under study.

Baseline measures are a strength of the study. One of the strengths of this study was believed to be the pretest-posttest control group design and its use of baseline measure. This enabled me to examine the effectiveness to the informational module and the effect of taking and passing the module as opposed to not taking the module. I was able to examine the effect on the relationship between self-care agency and compassion satisfaction with and without the moderator of self-care actions. Repeated measures were taken in this study that produce a baseline score that was compared to the measures after the informational module has been taken, where the differences in the measures could

reveal variations in measures occurring before and after the module (Cherry, 2000, p. 110).

It was suggested that when baseline measures were used in this way, "they [also] act similar to a control group… they control for some threats to internal validity" (Cherry, 2000, p. 110). It was suggested that "a good baseline has enough repeated measures to allow the researcher to rule out extraneous factors that could explain changes in measure caused by factors other than the [module] (p. 105)…This method helped confirm that the change is unlikely due to coincidence" (Cherry, 2000, p. 104). Like a regression discontinuity design's use of baseline values of each individual participant, the pretest-posttest control group design of this moderation regression design and the independent samples and paired samples *t* tests also employed tactics where the actual number of valid individual experiments within the study depended on the number of individual baseline scores. And, with the moderation regression design and the use of a control group, the threats to internal validity could be ruled-out (Trochim, 2006 p. 8).

Within group design is a strength of the study. I used a within-subjects design to explain the external validity and the generalizability of the findings. It was proposed that the moderation regression design is a form of within-subjects design where the participants are chosen from a master's level and above stratum of members on a designated roster of licensed members. This within-subjects design gave me some measure of external validity by providing an opportunity to the generalize findings to individuals with the characteristics of this population. The within-subjects design, also offered me a baseline as an initial starting point in data collection. And because of the

structure, using a moderation regression design presented me with the "ability to draw correct inferences about the population under study" (Campbell & Stanley, 1963, p. 56).

I had "repeated measures of each [participant's] responses that are obtained as he or she is exposed to the condition of the study (e.g., the presence or absence of the independent variable)" (Cooper et al., 2007, p. 163). In the moderation regression design, a bootstrapping technique incorporated in PROCESS macro and SPSS also generated repeated measure for statistical analysis centered on the mean distribution which seemed appropriate for this study. With the stipulation that all measures come from the continuous measure of the initial participants, it was proposed that the moderation regression design was a modification or an advancement of the within-subject design; and a moderation regression design seemed the more appropriate design for this study.

Average power with low effect size is weakness of the design. A single participant, or small number of participants would be a deviation from the group comparison designs that are traditionally used in quantitative research where large numbers of participants are employed (Cooper et al., 2007, p. 164); where as it was proposed that a larger number of participants would control for the variability and increase the generality or external validity of the findings to the population from which the participants were drawn (Cooper et al., 2007, p. 164).

This study used 46 participants, seeking an effect size of 0.15, and a power value of 0.80. These values were chosen a priori. However, a limitation of the moderation regression design is related to power. Kenny (2015b) explained that, although a priori of 0.15, a medium effect size was chosen by me, a more realistic effect size for moderation

regression analysis is much lower; and some literature reviewed puts the common effect size at 0.009. Therefore, the power values for the test of moderation regression could be very low causing a concern with the statistical validity of the study.

If I chose to increase the power, it would require hundreds more participants. I believed that this was the appropriate design for this study. What I wanted to show was that a change in effect has occurred, while realizing that these values may be very low. I believed that using the moderation regression design would present me with the "ability to draw correct inferences from the data about the population under study" (Campbell & Stanley, 1963, p. 56) while Kenny (2015b) proposed that "a moderation analysis in an exercise of external validity in that the question is how universal is the causal effect (p. 1). Kenny (2015) proposed that "a moderation analysis is an exercise of external validity in that the question is how universal is the causal effect (p. 1). A moderation regression design was chosen for this study because I proposed that it could appropriately test the hypothesis about the relationship between the variables in this study.

Ethical Procedures

Before obtaining the names of potential participants from the designated roster, I read and complied with the agency's attempts to protect its members. An agreement for the roster was completed and attached to the IRB document. It discussed how access to the roster was to be gain by me. I agreed to comply with the state's Privacy and Protection Act acknowledging that records from that agency could not be used for the purpose of commercial solicitation which covered the area of commercial solicitation by telephone, mail, or electronic mail. I also agreed to abide by the agency's measures to

ensure that no personal information was distributed for unlawful purposes. This research

project complied with the terms for release of information based on the section offering

continuing education opportunities to members of the roster.

I addressed confidentiality in the study, and I addressed ethical concerns for

research that complied with Walden's IRB. I conducted the research data gathering

through the SurveyMonkey website by building a private site on their platform. However,

there was literature to suggest that certain ethical precautions that needed to be taken with

this type of data gathering. A review of the literature suggested that "everyone who has

access to a single SurveyMonkey account seems to have access to the account by

password. This meant that "data stored within shared SurveyMonkey accounts cannot be

held confidentially" (Knussen & McFadyen, 2014, p. 1). Therefore, I addressed this

concern. At the conclusion of the data collection, the data was imported from the site and

closed by me without further use of the site for data maintaining. The following steps will

be taken concerning the study:

- At the conclusion of this study, Is may publish the findings. However, with any
  publications based on the findings of this study, the data presented will contain no
  identifying information that could be linked to the individual participant.

- I will retain responses to the questionnaire without identifying personal
  information attached to the individual questionnaires.

- All electronic files including databases, spreadsheets, removable computer drives
  containing identifiable information were password protected.

- Although the email data was entered into the survey database, to protect the

   participant's identity, I used the anonymous feature incorporated in this program.

   By default in this program, SurveyMonkey, the IP address and email address of

   each participant was stored with the survey results. However, there was the option

   in the program that allowed me to make responses anonymous, concealing

   identifying information on the participant including email addresses, IP addresses,

   and IP tracking. I designed this anonymous feature into the study when building

   the database, and before sending the postcard invitation to participants.

   I addressed anonymity. The responses collected from each participant were

protected using the anonymous feature built in the data gathering feature in the

SurveyMonkey program. No information in the questionnaire will be made public in any

form that could identify the individual participant. I paid attention to IP Addresses.

   It is important for a researcher to know that online survey tools that are hosted by

   American companies are subject to U.S. laws; in particular, the *US Patriot Act*,

   which allows authorities access to the records of internet service providers

   (Swansea University, 2011, p. 1) and unless [I] indicates otherwise, when

   constructing a survey, a U.S.-based company's servers will record incoming IP

   addresses – including that of the computer that participants use to access the

   survey. The researcher is advised to set up the survey to collect anonymous

   responses…If [I] uses the Email Invitation collector; [I] must configure it to not

   save the email addresses (in the Analyze section) and not to collect IP addresses.

   (Swansea University, 2011, p. 1)

I followed the suggestions of Swansea University (2011) as noted above. To help protect the identity of the participants using the SurveyMonkey program, I made responses anonymous, concealing identifying information on the participant including email addresses, IP addresses, and IP tracking, and incorporated this feature before sending the postcard invitation to the participants. With this feature, there was no general way of tracing individual respondents.

I made use of the SSL Encryption on the developed site. The website built through SurveyMonkey provided me with the opportunity to use a Secure Socket Layer (SSL) encryption where sensitive participant information that was transmitted would be encrypted, thus creating a secure connection for the participant. With SSL encryption, the following browsers were supported: Chrome 16 or later, Firefox, 13.0 or later, Safari 5.0 of later and Internet Explorer 9.0 or later.

I password protected access to survey data on the research site. I assigned a unique response ID for each participant to assist with anonymity. An ID number was used to enter the survey page and only those participants with ID numbers within the specified ID range had their data counted in the study. The website would stop collecting initial responses to the surveys on a specified date or when the specified maximum count was reached. On the web site, I had the link and instructions for each group, the program group and the control group, for the *Tools for Trauma: A CBT Approach* informational module to be used as the moderator in this study. The participant used the unique group ID number to participate in the 4- session informational module. A constraint of this course was that each session required a mastery of 80% - 100% proceed to the next one

of 4 sessions culminating with an exam that also requires 80% - 100% mastery. This constraint was made known on the "Informed Consent" document embedded on the webpage before the participant agreed to participate in the study.

I informed the participant of inclusion and exclusion criteria, and the right to withdrawal and omission of items. I also informed the participant that, although I would like a response to each item on the surveys, participants were informed that no item, other than those relating to consent, required a response; that they could choose not to respond to certain statements in the questionnaires. Respondents were told, before they entered the surveys, if they decided not to continue to participate in the study and have their responses entered once they have started the questionnaires, they could exit the survey at any time. I formally prepared the participant for the study exit. At the end of the pretest, the participant was given instructions on the webpage for the next part of the study and a reminder of the next procedures.

A document, embedded in website of the study, thanked the participant for their participation. At the end of the study, I will provide debriefing information for the participants. On this document, I has reviewed review previously shared information about the study, and now included more in-depth information: revisiting the purpose of the study, hypotheses of the study, and the anticipated findings of the study. The participants will be given a list of resources for further reading on the constructs under study.

There were follow-up procedures for the participants. The participants were given contact information to follow-up with the actual results of the study. The participant were

also be given contact information if they had questions, concerns, or comments about this

research study. This also applied to possible discomfort or risks to participants. The level

of risk involved in this study for participants was considered very low. However, if the

participant felt concern about anything raised by this study, the participant was asked to

feel free to contact me; the Committee Chair, or Walden's IRB for discussion. As

disclosed in Chapter 1, I am a trauma therapist; has participated in the proposed

informational module; and has been exposed to the crises traumas of clients as part of the

job.

  The data collection in the study and the proposed informational module was done

online and independent of me; and data for the regression and moderation regression

analysis and the related samples design was analyzed as imported data with the use of the

SPSS software program and the PROCESS macro. For the purpose of accuracy of

measures, and during this study, the committee members had access to data that had been

stripped of all identifying information except randomized IDs. The data gathered would

be formally destroyed after a 7 year period of time.

  There was an incentive for the completion of the study. The participants were

offered an informational module that could assist them when working with clients

experiencing crises and trauma. The participant could also personally take advantage of

other modules in the area of trauma offered by the institute at their own expense. It was

believed by me that, by providing this useful informational module to all participants of

the study, it would control for some of the research mortality that could potentially occur

in this study. This incentive was not seen by me as an unfair compensation for participation in this study.

Summary

To summarize of design and methodology of the method of inquiry, this study design followed a two-group pretest-posttest control group model (Trochim, 2006a). Like a regression discontinuity design, a strength of this moderation regression design was that "the hypotheses are exposed to tests" (Campbell & Stanley, 1963, p. 61). By looking at the constructs of self-care agency from its four subfactors, I examined questions surrounding the social worker participant's (a) the social worker's motivation; (b) active versus a passive response to situations; (c) the knowledge base of the social worker; and (d) the social worker's sense of self-worth. And, with a moderation regression design, the research had empirical data on how self-care actions, a component of self-care agency, could affect the social worker participant's compassion satisfaction. I used multiple indices to assess the overall effect of the predictors on the dependent variable (Green & Salkind, 2011, p. 288). Based on both the measurement scale, the ProQOL Scale and the Exercise of Self-Care Agency Scale both the dependent and independent variables were quantitative variables in this study.

The moderation regression data gathering was limited to licensed master's level social workers who had practiced the phenomenon of compassion and who were currently practicing social work. Individuals agreeing to participate entered either the program group or the control group. The study involved an initial survey, an informational module, and a follow-up survey for the program group, and an initial

survey and a post-survey for the control group. Each participant in the program group had a baseline and self-care actions score; and each participant in the program group was considered an intact experiment (Cooper et al., 2007, p. 164). The study had 46 actual participants. With this moderation regression design, a measure was taken during the baseline phase, or pretest phase, and compared to the measure after the self-care actions and posttest phase; examining any differences in the measures that had the potential of revealing variations occurring before and after the informational module (Cherry, 2000, p. 110). I suggested that this design could be replicated, and that both individual and group data could be gathered for the purpose of comparison with this design.

I also proposed that this two part study exposed my hypotheses to actual or real-world tests; that the informational module in this study provided the opportunity for a real-world investigation of the research on *The Impact of Self-Care Agency and Compassion Satisfaction on the Professional Social Worker.* In this study, the social worker's repertoire was "put into contact with naturally occurring contingencies of reinforcement" (Cooper et al., 2007, p. 243) by having the participant continue with regularly assigned duties during and after the completion of the *Tools for Trauma: A CBT Approach* informational module. I proposed that the infusion this module into this study allowed for the examination of practical applications of self-care skills attained; that the informational module could increase the participant's knowledge of theory and understanding of trauma therapy - a course of action predicted to lead to improved compassion satisfaction.

Therefore, when I used a quantitative moderation regression design, I proposed that the data gathered from this design could help improve knowledge of how self-care actions, a component of self-care agency, could affect compassion satisfaction in the professional who assists traumatized clients. I showed that a change in measure in the compassion satisfaction did occur; and I addressed the question that if a change in measure occurred, was this change is statistically significant?

The premise put forth the in this study was that self-care actions, a component of self-care agency, was believed to have an effect on compassion stress and the outcomes of compassion satisfaction observed on a continuum of compassion (Figley, 2002; Radey & Figley 2007). In this study, the dependent variable was compassion satisfaction, a subconstruct of compassion. The independent variable, or predictor variable, was self-care agency and its four subconstructs: (a) the individual's motivation; (b) an active versus a passive response to situations; (c) the knowledge base of the individual; and (d) the individual's sense of self-worth (Kearney & Fleischer, 1979, pp. 26-27; Riesch & Hauch, 1988, p. 245). It was further proposed that self-care actions would functions as the moderating variable allowing me to determine the extent to which self-care actions explained a variance in the construct of compassion satisfaction.

I conducted a regression analysis, repeated measures ANOVAs and paired sample *t* tests on the IVs and DV, which culminated with a moderation regression analysis. I ran a moderation regression analysis using the integrated computer programs of SPSS Version 23 and PROCESS Version 2.16. In this study, I hypothesized about moderated

effects, where the moderation effects could also be termed interactions (Hayes & Matthes, 2009, p. 924).

At the conclusion the data analysis, I was able to say if a moderated effect of self-care agency on compassion satisfaction depended on the value of self-care actions (p. 924); or if a moderated effect of self-care agency, and its four divisions, and compassion satisfaction was one in which its size or direction depended on the value of the self-care actions (p. 924). And, if an interaction or a moderated effect was found, I would further probe the interaction for specific patterns of effects of the self-care agency as a function of self-care actions (p. 924). I also sought "to better understand the conditions under which the relationship" (p. 924) between [self-care agency] and its four divisions, and [compassion] was "strong versus weak and positive versus negative" (p. 924). In this study, "moderation results indicated 'when'… a variable most strongly predicts or causes an outcome variable" (Beaujean, 2008, p. 423).

In Chapter 4, I answered the research questions and concisely reported the results of the study. I described actual time frame of data collection, including recruitment and response rates, and any discrepancies in the planned that I presented in Chapter 3. I also reported the demographics, external validity, module fidelity, and the results of the study.

Chapter 4: Results

Introduction

A review of the literature revealed that the social worker is required to empathize with the client as part of the job, and that empathy with the client is a core principle of social work. However, a review of the literature also suggested that there is currently a poor understanding of the effects of the empathetic interaction between the social worker and the traumatized client; that the social worker does not have adequate empirical research on the interaction, creating a gap in the field; and that minimal research has been undertaken to date by social work researchers. The intent of this study was to begin to address these concerns and to provide support for the social work profession through empirical research.

I examined data and a resource that could potentially support the social worker on the job. For this present study, data was collected from 46 licensed social worker participants who gave responses to two previously validated questionnaires or scales: the Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979), and the ProQOL Version-5 Scale (Stamm, 2010). Four research questions were examined in this study based on the participants' responses.

Because there was significance found in the Exercise of Self-Care Agency Scale, the revised Exercise of Self-Care Agency 2 Scale, and some of components of the factored scale, an adjustment was made in the numbering of the hypotheses. The research questions and the hypotheses remained the same, but the numbering of the hypotheses changed. The research questions and hypotheses in this study were as follows:

RQ1: Is there a statistically significant linear relationship between the exercise of self-care agency and compassion satisfaction in the population under study? This included the hypothesis that

H_01_1: There is not a statistically significant relationship between the exercise of self-care agency and compassion satisfaction in the population under study.

H_a1_1: There is a statistically significant relationship between the exercise of self-care agency and compassion satisfaction in the population under study.

RQ1: Is there a statistically significant linear relationship between the exercise of self-care agency 2 and compassion satisfaction in the population under study? This included the hypotheses that

H_01_2: There is not a statistically significant linear relationship between the exercise of self-care agency 2 and compassion satisfaction in the population under study.

H_a2_1: There is a statistically significant linear relationship between the exercise of self-care agency 2 and compassion satisfaction in the population under study.

Based on the findings on Exercise of Self-Care Agency 2 Scale, additional factored variables and hypotheses were included.

H_01_3: There is not a statistically significant linear relationship between motivation/initiative and responsibility (Factor 1) and compassion satisfaction in the population under study.

H_a1_3: There is a statistically significant linear relationship between motivation/initiative and responsibility (Factor 1) and compassion satisfaction in the population under study.

H_01_4: There is not a statistically significant linear relationship between an active versus a passive response to situations (Factor 2) and compassion satisfaction in the population under study.

H_a1_4: There is a statistically significant linear relationship between an active versus a passive response to situations (Factor 2) and compassion satisfaction in the population under study.

H_01_5: There is not a statistically significant linear relationship between knowledge and information seeking (Factor 3) and compassion satisfaction in the population under study.

H_a1_5: There is a statistically significant linear relationship between knowledge and information seeking (Factor 3) and compassion satisfaction in the population under study.

H_01_6: There is not a statistically significant linear relationship between self-worth, self-esteem, and self-concept (Factor 4) and compassion satisfaction in the population under study.

H_a1_6: There is a statistically significant linear relationship between the self-worth, self-esteem, and self-concept (Factor 4) and compassion satisfaction in the population under study.

RQ2: Is there a statistically significant relationship between self-care actions and the exercise of self-care agency in the population under study?

H_02_1: There is not a statistically significant relationship between self-care actions and the exercise of self-care agency in the population under study.

H_a2_1: There is a statistically significant relationship between self-care actions and the exercise of self-care agency in the population under study.

H_02_2: There is not a statistically significant relationship between self-care actions and Exercise of Self-Care Agency 2 in the population under study.

H_a2_2: There is a statistically significant relationship between self-care actions and Exercise of Self-Care Agency 2 in the population under study.

Based on the findings on Exercise of Self-Care Agency 2, additional factored hypotheses were included.

H_02_3: There is not a statistically significant relationship between self-care actions and motivation/initiative and responsibility (Factor 1) in the population under study.

H_a2_3: There is a statistically significant relationship between self-care actions and motivation/initiative and responsibility (Factor 1) in the population under study.

H_02_4: There is not a statistically significant relationship between self-care actions and an active versus a passive response to situations (Factor 2) the population under study.

H_a2_4: There is a statistically significant relationship between self-care actions and an active versus a passive response to situations (Factor 2) in the population under study.

H_02_5: There is not a statistically significant relationship between self-care actions and knowledge and information seeking (Factor 3) in the population under study.

H_a2_5: There is a statistically significant relationship between self-care actions and knowledge and information seeking (Factor 3) in the population under study.

H_02_6: There is not a statistically significant relationship between self-care actions and the self-worth, self-esteem, and self-concept (Factor 4) in the population under study.

H_a2_6: There is a statistically significant relationship between self-care actions and the self-worth, self-esteem, and self-concept (Factor 4) in the population under study.

RQ3: Is there a statistically significant relationship between self-care actions and compassion satisfaction in the population under study?

H_03_1: There is not a statistically significant relationship between self-care actions and compassion satisfaction in the population under study.

H_a3_1: There is a statistically significant relationship between self-care actions and compassion satisfaction in the population under study.

RQ4: Is there a statistically significant relationship between the exercise of self-care agency and compassion satisfaction in the social worker population under when controlling for the self-care actions in the population under study?

H_04_1: There is not a statistically significant relationship between the exercise of

self-care agency and compassion satisfaction in the social worker population

under when controlling for the self-care actions in the population under study.

H_a4_1: There is a statistically significant relationship between the exercise of self-

care agency and compassion satisfaction in the social worker population under

when controlling for the self-care actions in the population under study.

H_04_2: There is not a statistically significant relationship between the exercise of

self-care agency 2 and compassion satisfaction in the social worker population

under when controlling for the self-care actions in the population under study.

H_a4_2: There is a statistically significant relationship between the exercise of self-

care agency 2 and compassion satisfaction in the social worker population under

when controlling for the self-care actions in the population under study.

Based on the findings on Exercise of Self-Care Agency 2, additional factored hypotheses

were included.

H_04_3: There is not a statistically significant relationship between

motivation/initiative and responsibility (Factor 1) and compassion satisfaction

when controlling for self-care actions in the population under study.

H_a4_3: There is a statistically significant relationship between motivation/initiative

and responsibility (Factor 1) and compassion satisfaction when controlling for

self-care actions in the population under study.

H_04_4: There is not a statistically significant relationship between an active versus a passive response to situations/passivity (Factor 2) and compassion satisfaction when controlling for self-care actions in the population under study.

H_a4_4: There is a significant relationship between an active versus a passive response to situations/passivity (Factor 2) and compassion satisfaction when controlling for self-care actions in the population under study.

H_04_5: There is not a significant relationship between knowledge and information seeking (Factor 3) and compassion satisfaction when controlling for self-care actions in the population under study.

H_a4_5: There is a significant relationship between knowledge and information seeking (Factor 3) and compassion satisfaction when controlling for self-care actions in the population under study.

H_04_6: There is not a significant relationship between self-worth, self-esteem, and self-concept (Factor 4) and compassion satisfaction when controlling for self-care actions in the population under study.

H_a4_6: There is a significant relationship between self-worth, self-esteem, and self-concept (Factor 4) and compassion satisfaction when controlling for self-care actions in the population under study.

This chapter discussed data collection, the actual recruitment procedures, the time frame, and the response rate of licensed social workers who participated in the study. I also reported discrepancies in data collection that varied from the original plan presented in Chapter 3, reported on the actual descriptive and demographic characteristics of the

participants under study and its relation to the larger population from which it was drawn, the informational module that was offered to the program group, and challenges that varied from the initial plan in Chapter 3.

Included in the discussion was the time frame of the study and technical difficulties related to study. I also addressed the statistical assumptions and gave a report the statistical findings as they related to the research questions and hypotheses with figures and tables to support the findings. Discussions of these analyses were organized by research questions and hypotheses which include the exact statistical and associated probability, the confidence intervals around statistics as appropriate, and the effect size. The chapter concludes with a summary of the findings.

Data Collection

This study was divided into two parts and I used a pretest/posttest control group, design. I asked for two weeks of the participant's time for participation in an informational module as part of the study, and the data collection phase of the took approximately one year to complete. Initial communication with potential participants was through postcard invitation. Contact email information for potential participants could not be provided by the organization. The mailing list for potential participants contained approximately 3,500 members, of which over 2,500 met the research criteria. Initially, every 11th person was placed into a group and 538 postcards were mailed out. These postcards were prepared with the assistance of the Research Randomizer Program where each potential participant was given an ID number before mailing - the even numbered ID would be the program group and the odd number ID would be the control

group participant. And, with the assistance of the SurveyMonkey program and the controls built into their program, data collection would stop for a particular group, the program group or the control group, when the required sample size was reached for that group. However, an adequate sample size was not reached for this first group and the invitation process continued.

The remainding roster was divided into smaller groups: Every first, second, third, fourth, fifth, sixth, seventh, eighth, ninth, 10th, 11th, and 12th person formed a group resulting in 12 more groups. Each group contained between 206 and 209 potential participants. Before mailing invitation postcards, each of the potential participant list was divided into even and odd numbers for division into two groups: a program group and a control group; and each contained a unique randomized ID number. The groups were then randomized as to group mailings as follows: 9, 10, 11, 4, 5, 6, 3, 2, 12, 8, 1, and 7. Sampling was ended when all members of the particular stratum had been sent an initial postcard invitation to participate in the study.

Forty-six LMSWs agreed to incorporate this study into their busy schedule. Each of the 46 participants was recruited by a postcard containing a unique ID number. Once the individual entered the study, an email address was provided to me for further communication. Each member of these groups had a randomized number using the Research Randomizer program, creating a randomized ID number. This unique, anonymous, randomized ID number was used by the participant throughout the study. A private, password protected internet site was used to gather the data, and only those with a password were able to enter the site.

There were two different informed consent documents and sites for each group: the program group and the control group. The informed consent documents were seen only by the potential participants for that group. Both groups were asked to take an informational module, *Tools for Trauma: A CBT Approach*, as part of the study, but at different times. This was a 4-session online informational module that offers tools for the individual as a professional. This informational module could usually be completed in a 2-day of face-to-face interaction but would be completed in a 2-week block of time online to accommodate the professional's demanding schedule. If the individual agreed to participate, he or she would use the randomized ID number provided above throughout the study. After completing the initial surveys, the individual would take note of the ID number. This would also be used to enter the informational module site at the completion of the surveys/questionnaires. The informed consent document informed its group that I would be comparing some different groups who would do the study steps in a different order.

- The program group would be asked to begin the informational module immediately after completion of the questionnaire with the completion of the module in a 2-week period.

- The control group was asked to take the initial surveys/questionnaires upon entering the study. And, in approximately six weeks he or she would receive an email giving the date to take the second survey/questionnaire and begin the informational module upon completion of the survey/questionnaire section.

It is proposed that these 46 randomly chosen participants from the LMSW strata were representative of its more than 2500 members. Therefore, in Part 1 of the study I was able to conduct an analysis centering on a linear relationship between the Exercise of Self-Care Agency Scale and compassion satisfaction. Part 2 of the study focused on a pretest, an informational module, and a posttest. The study used a pretest/posttest (within-subject) format called Time (Time 1 versus Time 2) and a between-subject format (program group versus a control group) called Group. The goal of the second part of this study was to determine if self-care actions (deliberate self-care actions), in the form of an informational module, could make a significant change in either the predictor variable (the independent variable) or the outcome variable.

Members of the overall roster pool included the stratum of Licensed Baccalaureate Social Worker (LBSW), Licensed Masters Social Worker (LMSW), and other independent categories. The participant with a master's level or higher of training was the target for this study. For this selected tier of participants, a master's in social work practice requires this professional social worker to use his or her specialized knowledge and skills when planning, implementing and evaluating cases, and to use their "self" to re-establish or augment the social or psychosocial performance of their clients, whether the client is an individual, group, organization, or community. It was believed that the duties of individuals in this tier tend to support the need for self-care agency in this professional.

Treatment Fidelity

There were challenges that may have prevented me from obtaining of an adequate sample size for this study. This study took place in an online environment where I actually developed the site. And, there were unforeseen technical problems that arose during the course of this study centering on entry into the research study's websites and the multi-step process to enter both the research site and the informational module's website. Because both websites were password protected to assure anonymity of the participants, as was promised in the Informed Consent documents, some potential participants encountered difficulties entering the sites. And, a few potential participants also had difficulties registering and entering the site containing the informational module. Another difficulty dealt with a typographical error on the printed postcard invitations for Group Nine, preventing easy access to the correct site. This may have possibly hindered more participation in the study from this group. However, all potential participants were given my contact email address on the postcard invitation to use if problems arose pertaining to participation in the study; and several actual participants took advantage of this option to enter the study. I did report these events concerning potential participants who may have had difficulty in entering the study site correctly and also discussed and data gathering adjustments with the IRB.

Sample: Part 1 of the Study

As illustrated in Tables 1 through 4 and Figures 3 through 3, the study population of 46 included 38 females (82.6%), seven males (15.2%) and one participant (2.3%) who preferred not to give a gender. There were 17 participants (37%) within the 25 to 34 year

age range; 13 participants (28.3) within the 35 to 44 year age range; seven participants (15.2%) in the 45-54 year age range; eight participants (17.4%) in the 55-64 year age range; and one (2.2%) within the 65-74 year age range. The ethnicity of the group included 27 (58.7%) Whites; one (2.2%) Hispanic or Latino; 15 (32.6%) African American or Blacks; and three (6.5%) who classify themselves as Other. Years of experience with trauma and crisis included 12 (26.1%) with 0-5 years of experience; 14 (30.49%) with 5-10 years of experience; 10 (21.7%) with 11-15 years of experience; two (4.3%) with 16-20 years of experience; five (10.9%) with 21-25 years of experience; and three (6.5%) with 30 plus years of experience. In this random group of participants, all age ranges, genders, and experience levels are represented in the sample. There were four ethnic groups represented in the sample group.

Table 1

Frequency Table of Gender: Part 1 of the Study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	38	82.6	82.6	82.6
	Male	7	15.2	15.2	97.8
	Prefer not to answer	1	2.2	2.2	100.0
	Total	46	100.0	100.0	

Table 2

Age Range: Part 1 of the Study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25-34	17	37.0	37.0	37.0
	35-44	13	28.3	28.3	65.2
	45-54	7	15.2	15.2	80.4
	55-64	8	17.4	17.4	97.8
	65-74	1	2.2	2.2	100.0
	Total	46	100.0	100.0	

Table 3

Experience with Crisis and Trauma: Part 1 of the Study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	White	27	58.7	58.7	58.7
	Hispanic or Latino	1	2.2	2.2	60.9
	African American or Black	15	32.6	32.6	93.5
	Other	3	6.5	6.5	100.0
	Total	46	100.0	100.0	

Table 4

Experience with Crisis and Trauma: Part 1 of the Study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5	12	26.1	26.1	26.1
	5-10	14	30.4	30.4	56.5
	11-15	10	21.7	21.7	78.3
	16-20	2	4.3	4.3	82.6
	21-25	5	10.9	10.9	93.5
	30+	3	6.5	6.5	100.0
	Total	46	100.0	100.0	
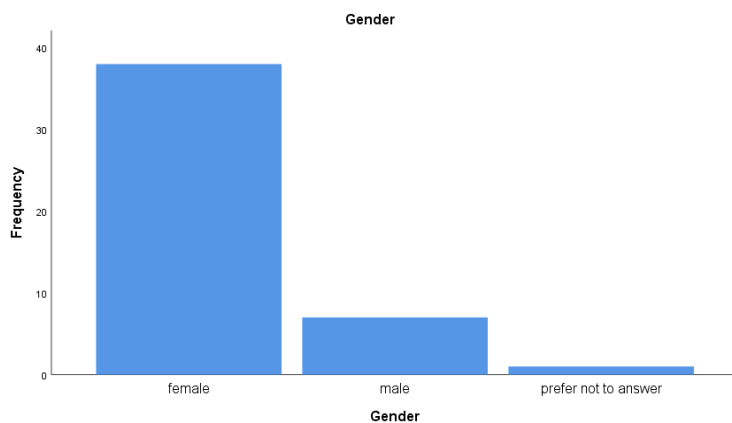
Figure 3. Gender: Part 1 of the study.
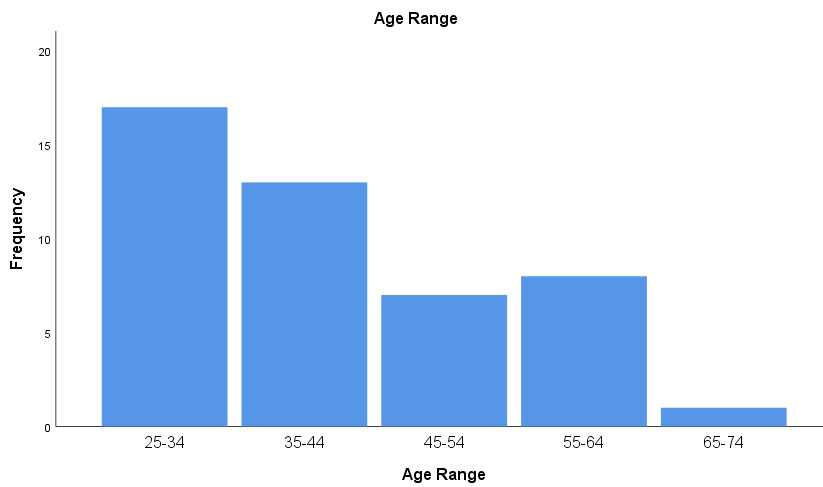
Figure 4. Age Range: Part 1 of the study.
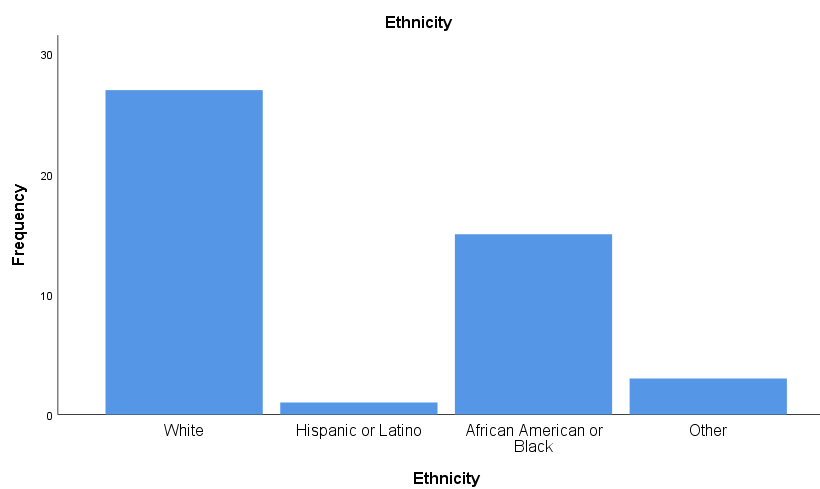
Figure 5. Ethnicity: Part 1 of the study.

Experience with Crisis and Trauma
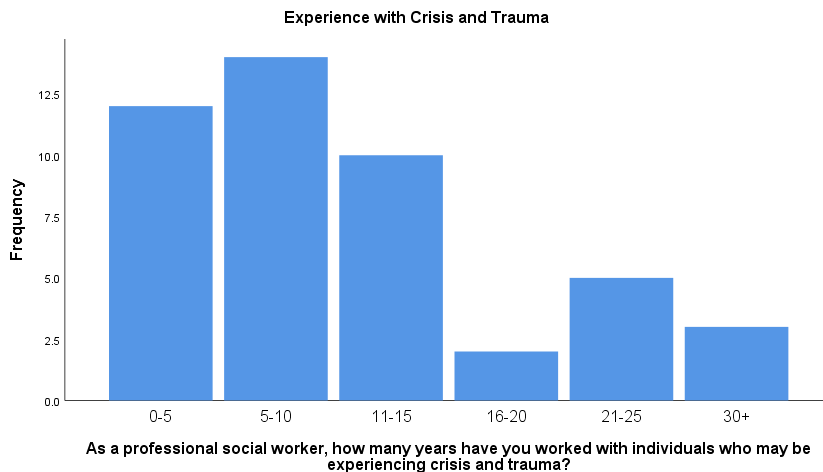
Figure 6. Experience with crisis and trauma: Part 1 of the study.

Procedures

Compassion Satisfaction: The Dependent Variable

The main discussion in this study was on compassion satisfaction and its

relationship to the exercise of self-care agency. However, there were some significant

findings related to the other dimensions of the ProQOL Scale from which the data was

gathered that will be noted in this study. The target dependent variable in this study was

compassion satisfaction which was guided by the compassion satisfaction/compassion

fatigue theory of Stamm (2010). Compassion satisfaction is one of three components of

the ProQOL Scale which also includes the variables secondary traumatic stress and

burnout. Secondary traumatic stress and burnout together are considered a measure of

compassion fatigue. Although each was treated as a discrete variable, all three fall under

the umbrella of the professional quality of life.

Descriptive Statistics for Compassion Satisfaction

The following results were observed and analyzed pertaining to this group of 46 licensed professional social workers in Part 1 of the study. For the compassion satisfaction scale in this study, the Cronbach's alpha value was 88.5 consisting of 10 items: ($M = 42.02$; $SD = 5.09$). There were no missing values in this data set. In this component of the ProQOL Scale, compassion satisfaction, any missing values were replaced with the neutral response of "sometimes" built into the scale by the author. For this dataset, the dependent variable, compassion satisfaction , was normally distributed: (Shapiro Wilk: $df(46) = .954$, $p = .067$), and the value of the Shapiro Wilk Test of Normality exceeded the .05 level of significance signaling that the dependent variable was normally distributed. The histogram showed the distribution of the data, the Q-Q figure showed that the relationship of the data points to the line, and the boxplot did not reveal any outliers. The Cronbach's alpha reliability index was 88.5. Ten items comprise Stamm's ProQOL compassion satisfaction scale with analyses illustrated in Table 5 through 9.

Reliability Statistics Scale: Compassion Satisfaction

Table 5

Reliability Statistics for Compassion Satisfaction

Cronbach's Alpha	N of Items
.885	10

Table 6

Item Statistics for Compassion Satisfaction

	Mean	Std. Deviation	N
I get satisfaction from being able to help people.	4.67	.474	46
I feel invigorated after working with those I help.	3.98	.882	46
I like my work as a helper.	4.43	.620	46
I am pleased with how I am able to keep up with helping techniques and protocols.	3.85	.788	46
My work makes me feel satisfied.	4.00	.843	46
I have happy thoughts and feelings about those I help and how I could help them.	4.02	.715	46
I believe I can make a difference through my work.	4.24	.736	46
I am proud of what I can do to help.	4.39	.649	46
I have thoughts that I am a "success" as a helper.	4.02	.774	46
I am happy that I chose to do this work.	4.41	.686	46

Note. The items are from the discrete compassion satisfaction in the Professional Quality of Life Scale (Stamm, 2010).

Table 7

Item-Total Statistics for Compassion Satisfaction

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation
I get satisfaction from being able to help people.	37.35	23.121	.558
I feel invigorated after working with those I help.	38.04	22.087	.365
I like my work as a helper.	37.59	21.626	.672

Item-Total Statistics for Compassion Satisfaction (continued)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation
My work makes me feel satisfied.	38.02	20.022	.683
I have happy thoughts and feelings about those I help and how I could help them.	38.00	21.689	.554
I believe I can make a difference through my work.	37.78	20.396	.745
I am proud of what I can do to help.	37.63	20.860	.777
I have thoughts that I am a "success" as a helper.	38.00	21.156	.580
I am happy that I chose to do this work.	37.61	21.221	.664

Note. The items are from the discrete compassion satisfaction scale in the Professional Quality of Life Scale (Stamm, 2010).

Table 8

Item-Total Statistics for Compassion Satisfaction

	Cronbach's Alpha if Item Deleted
I get satisfaction from being able to help people.	.880
I feel invigorated after working with those I help.	.897
I like my work as a helper.	.871
I am pleased with how I am able to keep up with helping techniques and protocols.	.866
My work makes me feel satisfied.	.869
I have happy thoughts and feelings about those I help and how I could help them.	.879
I believe I can make a difference through my work.	.865
I am proud of what I can do to help.	.864
I have thoughts that I am a "success" as a helper.	.877
I am happy that I chose to do this work.	.871

Note. The items are from the discrete compassion satisfaction scale in the Professional Quality of Life Scale (Stamm, 2010).

Table 9

Scale Statistics for Compassion Satisfaction

Mean	Variance	Std. Deviation	N of Items
42.02	25.888	5.088	10

The Exercise of Self-Care Agency Scale

In the planning of an instrument to measure self-care agency, Kearney and Fleischer (1979) developed 43 items designed to measure a person's exercise of self-care agency (p. 24). In their research article it was explained that they prepared a diagram to assist in generating items that would cover various dimensions of self-care agency; and this diagram provided a basic map to develop the items as seen in Figure 2 of Chapter 2. These researchers were looking for "salient characteristics of a person's exercise of self-care agency" (p. 25). The goal was to develop an overall measurement of self-care agency without developing subscales with construct validity studies for each subscale. Dr. Fleischer relayed that "a factor analysis would be able to provide [this researcher] with the quantitative data needed to identify the subscales in the Exercise of Self-Care Agency Scale" (Personal communication, September 8, 2018) where permission to use the scale and the diagram was also granted (see Appendix G). Therefore, to determine the subscales of the Exercise of Self-Care Agency, a factor analysis was conducted in this study.

Theoretical self-care literature from the Nursing Development Conference Group (1973) was reviewed by these original researchers which allowed them to formulate

hypotheses about self-care agency (p. 28). Content validity for the original scale was established by Kearney and Fleischer by having five experts in the field self-care agency assist in arriving at the 43 item scale (p. 27). Kearney and Fleischer ultimately developed a four-factor composition of self-care agency: an active versus a passive response to situations, where the indicant was being responsible to self; motivation, where there was motivation to care for self; knowledge, focusing on applying knowledge to self-care; and self-worth, focusing on health priorities and self-esteem.

In 1988, Reisch and Hauch conducted an investigation of the Exercise of Self-Care Agency to "delineate the concept contributing to the scale" (p. 245) developed by Kearney and Fleischer where they tested the construct and discriminate validity of the Exercise of Self-Care Agency Scale. They found that the data "was congruent with the theoretical work of the Nursing Conference Development Group (1973) and that of Kearney and Fleischer (p. 246). For their study, Reisch and Hauch had 11 nurse experts review the content validity of their work (p. 246). To support the naming the factors for this present study, factors found by Kearney and Fleischer, and the work of Reisch and Hauch were used in placing the items of the scale into the factors. The factor names can be seen in Table 10.

Table 10

Naming the Factors

Factor1: Motivation /Initiative and Responsibility
I deserve all the time and care it takes to maintain my health.
I am a good friend to myself.
I expect to reach my peak wellness.
I take pride in doing the things I need to do in order to remain healthy.
Life is a joy.
Factor 2: Active Versus a Passive Response to Situations
I often put off doing things that I know would be good for me.
I often feel that I lack the energy to care for my health needs the way I would like to.
I eat a balanced diet.
I rarely carry out the resolutions I make concerning my health.
I have a planned program for rest and exercise.
I take good care of myself.
Factor 3: Knowledge and Information Seeking
I take responsibility for my own actions.
I seek information to care for myself.
I look for better ways to look after my health.
Factor 4: Self-Worth, Self-Esteem, Self-Concept
I have little to contribute to others.
I do not contribute to my family's functioning.

Note. These factors are based on the items from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1971) with the assistance of the work of Reisch and Hauch (1988).

The overall independent variable or predictor variable in this study, self-care agency, was factored and reduced to its four subconstructs or dimensions for analysis: (a) the individual's motivation, (b) an active versus a passive response to situations; (c) the knowledge base of the individual; and (d) the individual's sense of self-worth (Kearney & Fleischer, 1979, pp. 26-27). The self-care/self-care deficit theory, put forth by Orem (1985) and developed into a scale by Kearney and Fleischer (1979), guided the independent variable of self-care agency in this study. The scores for both the original Exercise of Self-Care Agency Scale and the reduced Exercise of Self-Care Agency Scale,

revised for this study, were derived from the original scale constructed by Kearney and

Fleischer (1979) and will be referred to throughout this study as Exercise of Self-Care

Agency 2. And, for the purpose of analysis, items contained in the scales were labeled

from ag1- ag43 with reversed-scored items also containing the letter 'r'.

In this study, using the original Exercise of Self-Care Agency Scale developed by

Kearney and Fleischer, the Cronbach's alpha value was .918 consisting of 43 items: ($M =$

126.76; $SD = 20.83$). There were no missing values in the final data set. Missing values

in the dataset were replaced with the neutral response of "no opinion" built into the scale

by the author. For this dataset, the independent variable, self-care agency, was normally

distributed: (Shapiro Wilk: $df(46) = .979, p = .555$), and the value of the Shapiro Wilk

Test of Normality exceeded the .05 level of significance signaling that the dependent

variable was normally distributed with related figures and tables to support the findings.

The Q-Q Plot showed that the relationship of the data points to the line was linear and the

boxplot did not reveal any extreme outliers. The reliability analyses can be seen in Tables

11 through 15.

Exercise of Self-Care Agency: Reliability Index

Table 11

Case Processing Summary for Exercise of Self-Care Agency

		N	%
Cases	Valid	46	100.0
	Excluded	0	.0
	Total	46	100.0

Note. Listwise deletion based on all variables in the procedure.

Table 12

Reliability Statistics for Exercise of Self-Care Agency

Cronbach's Alpha	N of Items
.918	43

Table 13

Item Statistics for Exercise of Self-Care Agency

	Mean	Std. Deviation	N
I would gladly give up some of my set ways if it meant improving my health.	2.96	.988	46
I like myself.	3.20	.980	46
I often feel that I lack the energy to care for my health needs the way I would like to.	1.48	1.26	46
I know to get the facts I need when my health feels weakened.	3.24	.947	46
I take pride in doing the things I need to do in order to remain healthy.	2.91	1.132	46
I tend to neglect my personal needs.	1.89	1.354	46
I know my strong and weak points.	3.41	.686	46
I seek help when unable to care for myself.	2.89	1.100	46
I enjoy starting new projects.	2.96	1.032	46
I often put off doing things that I know would be good for me.	1.74	1.437	46
I usually try home remedies that have worked in the past rather than going to see doctor or nurse for help.	2.28	1.425	46
I make my own decisions.	3.76	.565	46
I perform certain activities to keep from getting sick.	3.26	.773	46
I strive to better myself.	3.59	.580	46
I eat a balanced diet.	2.57	1.205	46
I complain a lot about the things that bother me without doing much about them.	2.63	1.323	46

(continued)

Item Statistics for Exercise of Self-Care Agency (continued)

	Mean	Std. Deviation	N
I look for better ways to look after my health.	3.11	.823	46
I deserve all the time and care it takes to maintain my health.	2.83	1.141	46
I follow through on my decisions.	3.39	.856	46
I have no interest in learning about my body and how it functions.	3.54	.836	46
If I am not good to myself, I believe I cannot be good for anyone else.	3.17	1.018	46
I understand my body and how it functions.	3.35	.640	46
I rarely carry out the resolutions I make concerning my health.	2.59	1.185	46
I am a good friend to myself.	2.74	1.084	46
I take good care of myself.	2.76	1.015	46
Health promotion is a chance thing for me.	2.20	1.025	46
I have a planned program for rest and exercise.	2.41	1.257	46
I am interested in learning about various disease processes and how they affect me.	3.07	1.063	46
Life is a joy.	3.15	.842	46
I do not contribute to my family's functioning.	3.35	1.079	46
I take responsibility for my own actions.	3.67	.598	46
I have little to contribute to others.	3.61	.881	46
I can usually tell that I am coming down with something days before I get sick.	3.17	.797	46
Over the years I have noticed the things to do that make me feel better.	3.52	.547	46
I know what foods to eat to keep me healthy.	3.43	.834	46
I am interested in learning all that I can about my body and the way it functions.	3.13	1.087	46
Sometimes when I feel sick I ignore the feelings and hope it goes away.	1.83	1.465	46
I seek information to care for myself.	3.15	.894	46
I feel I am a valuable member of my family.	3.57	.688	46
I remember when I had my last health check and return on time for my next one.	3.28	1.186	46
I understand myself and my needs pretty well.	3.33	.762	46

Note. Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 14

Item-Total Statistics for Exercise of Self-Care Agency

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I would gladly give up some of my set ways if it meant improving my health.	123.80	412.605	.508	.915
I like myself.	123.57	408.429	.620	.914
I often feel that I lack the energy to care for my health needs the way I would like to.	125.28	396.874	.707	.913
I know to get the facts I need when my health feels weakened.	123.52	419.811	.342	.917
I take pride in doing the things I need to do in order to remain healthy.	123.85	399.821	.726	.913
I tend to neglect my personal needs.	124.87	408.960	.423	.917
I know my strong and weak points.	123.35	426.143	.260	.918
I seek help when unable to care for myself.	123.87	413.849	.422	.916
I enjoy starting new projects.	123.80	424.205	.205	.919
I often put off doing things that I know would be good for me.	125.02	396.155	.625	.914
I usually try home remedies that have worked in the past rather than going to see doctor or nurse for help.	124.48	439.588	-.128	.925
I make my own decisions.	123.00	431.111	.108	.919
I perform certain activities to keep from getting sick.	123.50	416.744	.527	.916
I strive to better myself.	123.17	420.502	.551	.916
I eat a balanced diet.	124.20	403.272	.604	.914
I complain a lot about the things that bother me without doing much about them.	124.13	405.360	.504	.915
I look for better ways to look after my health.	123.65	408.810	.736	.914
I expect to reach my peak wellness.	124.02	402.377	.660	.913
When I have a problem, I usually want an expert to tell me what to do.	124.85	439.554	-.145	.923
I deserve all the time and care it takes to maintain my health.	123.93	405.796	.584	.914

(continued)

Item-Total Statistics for Exercise of Self-Care Agency (continued)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I have no interest in learning about my body and how it functions.	123.22	418.618	.428	.916
I rarely carry out the resolutions I make concerning my health.	124.17	399.880	.690	.913
I am a good friend to myself.	124.02	404.555	.648	.914
I take good care of myself.	124.00	403.511	.721	.913
Health promotion is a chance thing for me.	124.57	420.562	.294	.918
I have a planned program for rest and exercise.	124.35	398.943	.666	.913
I am interested in learning about various disease processes and how they affect me.	123.70	416.039	.387	.917
Life is a joy.	123.61	411.132	.648	.914
I do not contribute to my family's functioning.	123.41	430.603	.049	.920
I take responsibility for my own actions.	123.09	421.237	.504	.916
I have little to contribute to others.	123.15	427.465	.157	.919
I can usually tell that I am coming down with something days before I get sick.	123.59	426.870	.196	.918
Over the years I have noticed the things to do that make me feel better.	123.24	421.964	.520	.916
I know what foods to eat to keep me healthy.	123.33	418.714	.426	.916
I am interested in learning all that I can about my body and the way it functions.	123.63	407.571	.574	.915

(continued)

Item-Total Statistics for Exercise of Self-Care Agency (continued)

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Sometimes when I feel sick I ignore the feelings and hope it goes away.	124.93	399.929	.544	.915
I seek information to care for myself.	123.61	409.132	.665	.914
I feel I am a valuable member of my family.	123.20	429.361	.145	.918
I remember when I had my last health check and return on time for my next one.	123.48	424.122	.173	.919
I understand myself and my needs pretty well.	123.43	414.251	.617	.915

Note. Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 15

Scale Statistics for Exercise of Self-Care Agency

Mean	Variance	Std. Deviation	N of Items
126.76	433.964	20.832	43

Next, the reliability coefficient of the Exercise of Self-Care Agency Scale was examined. For this study the internal consistency of the original version of the scale was determined through the split-half method of analysis. The current study's reliability indices were calculated using even/odd item analysis of the Spearman-Brown coefficient and compared to the Cronbach's alpha reliability statistics for the 43 item Exercise of Self-Care Agency Scale. The total reliability score of the Cronbach's alpha reliability for

the original Exercise of Self-Care Agency Scale , using the even/odd split-half method, was 91.8 with reliability for Part 1 of .855, (M= 66.39, *SD* = 11.192) containing 22 of the 43 items, and a reliability for Part 2 of .851 (M = 60.37, *SD* = 10.742) containing 21 of the 43 items. The correlation between the two forms was .804. The Spearman-Brown unequal length coefficient was .891 and the Guttman split-half coefficient was .891. Analyses can be seen in Tables 16 through 23.

Table 16

Reliability Statistics for Exercise of Self-Care Agency

Cronbach's Alpha	N of Items
.918	43

Table 17

Scale Statistics for Exercise of Self-Care Agency

Mean	Variance	Std. Deviation	N of Items
126.76	433.964	20.832	43

Table 18

Split-Half Reliability Statistics: Normal Order Item Analysis for Exercise of Self-Care

Agency

Cronbach's Alpha	Part 1	Value	.844
		N of Items	22[a]
	Part 2	Value	.855
		N of Items	21[b]
	Total N of Items		43
Correlation Between Forms			.847
Spearman-Brown Coefficient	Equal Length		.917
	Unequal Length		.917
Guttman Split-Half Coefficient			.915

Table 19

Split-Half Scale Statistics for Exercise of Self-Care Agency

	Mean	Variance	Std. Deviation	N of Items
Part 1	62.28	127.674	11.299	22[a]
Part 2	64.48	107.677	10.377	21[b]
Both Parts	126.76	433.964	20.832	43

Table 20

Split-Half Reliability Statistics for Exercise of Self-Care Agency

Cronbach's Alpha	Part 1	Value	.855
		N of Items	22[a]
	Part 2	Value	.851
		N of Items	21[b]
	Total N of Items		43
Correlation Between Forms			.804
Spearman-Brown Coefficient	Equal Length		.891
	Unequal Length		.891
Guttman Split-Half Coefficient			.891

Table 21

Split-Half Scale Statistics for Exercise of Self-Care Agency

	Mean	Variance	Std. Deviation	N of Items
Part 1	66.39	125.266	11.192	22[a]
Part 2	60.37	115.394	10.742	21[b]
Both Parts	126.76	433.964	20.832	43

Table 22

Split-Half Reliability Statistics: Even/Odd Item Order Analysis for Exercise of Self-Care Agency

Cronbach's Alpha	Part 1	Value	.855
		N of Items	22[a]
	Part 2	Value	.851
		N of Items	21[b]
	Total N of Items		43
Correlation Between Forms			.804
Spearman-Brown	Equal Length		.891
Coefficient	Unequal Length		.891
Guttman Split-Half Coefficient			.891

Table 23

Split-Half Scale Statistics for Exercise of Self-Care Agency

	Mean	Variance	Std. Deviation	N of Items
Part 1	66.39	125.266	11.192	22[a]
Part 2	60.37	115.394	10.742	21[b]
Both Parts	126.76	433.964	20.832	43

Factor Analysis of Exercise of Self-Care Agency to Exercise of Self-Care Agency 2

The original Exercise of Self-Care Agency Scale was factored into its component

parts. And, for this revised Exercise of Self-Care Agency Scale, the KMO and Bartlett's

Test, Kaiser-Meyer-Olkin Measure of Sampling Adequacy measure was .775 with the

Bartlett's Test of Sphericity of the Approx. Chi Square equaling 477.093, with degrees of

freedom equalling120, and a significance level of 0.000 indicating that the variable was

factorable. I was seeking a KMO value at or above .7.

Initial eigenvalues loaded on 4 components having a value of one eigenvalue and

above, which explained 74.66 percent of the variance in the variable Exercise of Self-

Care Agency 2 Scale. Next, conducting a Principal Component Analysis, a Promax

Rotation method requesting a four factor extraction was also used. Values above .5 and

above were accepted into the rotation. Rotation and cross analysis with eliminations were

continuously conducted until a value above .7 was reached (.775). The final Pattern

Matrix contained items that loaded on four components. With the final rotation, and

74.66 percent of the variance in the variable explained, the variable of the Exercise of

Self-Care Agency 2 Scale was formed. My goal was to extract items for all original four

factors to adhere to the foundation and theory of the original scale put forth by Kearney

and Fleischer. Factor analysis revealed the items that comprised the Exercise of Self-Care

Agency 2 Scale (ag3r, ag5, ag10r, ag17, ag18, ag20, ag25r, ag26, ag27, ag29,

ag40, ag31, ag15, ag32r, ag34r, ag33). Next, a reliability index was calculated for the

Exercise of Self-Care Agency 2 Scale with results seen in Tables 24 through 29 and

Figure 7.

Table 24

KMO and Bartlett's Test for Exercise of Self-Care Agency 2

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.775
Bartlett's Test of Sphericity	Approx. Chi-Square	477.093
	df	120
	Sig.	.000
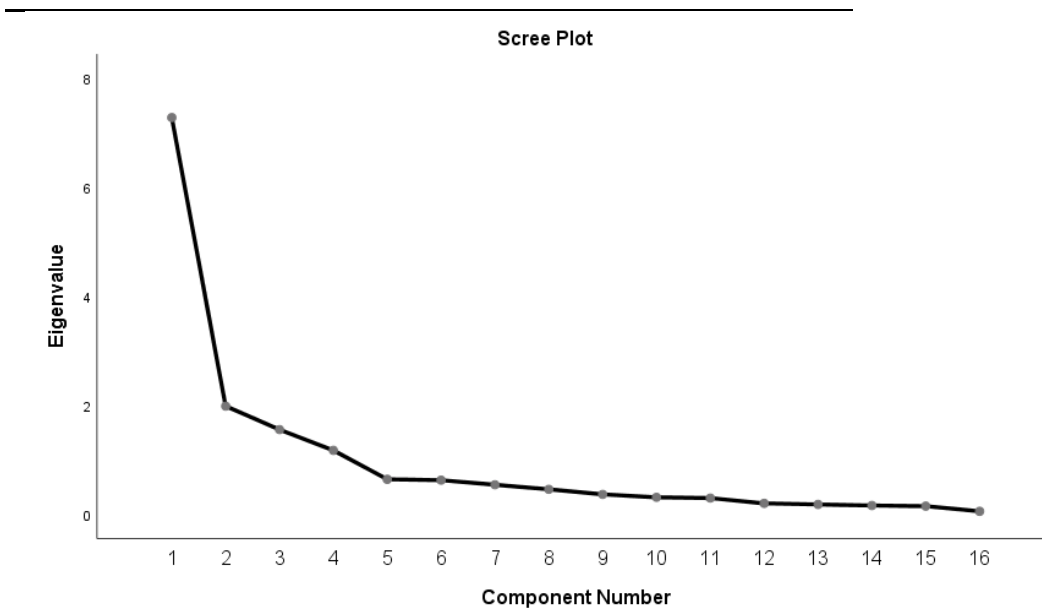
Figure 7. Scree plot of self-care agency.

Table 25

Total Variance Explained for Exercise of Self-Care Agency 2

	Initial Eigenvalues			Rotation Sums of Squared Loadings
Component	Total	% of Variance	Cumulative %	Total
1	7.279	45.494	45.494	5.829
2	1.985	12.409	57.903	6.042
3	1.555	9.717	67.620	3.942
4	1.174	7.340	74.960	1.943
5	.643	4.021	78.981	
6	.627	3.917	82.898	
7	.544	3.399	86.298	
8	.460	2.874	89.172	
9	.367	2.295	91.466	
10	.313	1.958	93.424	
11	.299	1.868	95.292	
12	.202	1.261	96.553	
13	.182	1.138	97.691	
14	.163	1.016	98.707	
15	.151	.943	99.650	
16	.056	.350	100.000	

Table 26

Pattern Matrix for Exercise of Self-Care Agency 2

	Component			
	1	2	3	4
I deserve all the time and care it takes to maintain my health.	.999			
I am a good friend to myself.	.888			
I expect to reach my peak wellness.	.727			
I take pride in doing the things I need to do in order to remain healthy.	.670			
Life is a joy.	.579			
I often put off doing things that I know would be good for me.		.905		
I often feel that I lack the energy to care for my health needs the way I would like to.		.813		
I eat a balanced diet.		.799		
I rarely carry out the resolutions I make concerning my health.		.785		
I have a planned program for rest and exercise.		.648		
I take good care of myself.		.599		
I take responsibility for my own actions.			.950	
I seek information to care for myself.			.792	
I look for better ways to look after my health.			.639	
I have little to contribute to others.				.908
I do not contribute to my family's functioning.				.866

Note. Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979). Extraction Method was Principal Component Analysis.
Rotation Method was Promax with Kaiser Normalization.
Rotation converged in 6 iterations.

Table 27

Total Variance Explained for Exercise of Self-Care Agency 2

	Rotation Sums of Squared Loadings
Component	Total
1	5.829
2	6.042
3	3.942
4	1.943

Note. Extraction method was Principal Component Analysis.

Table 28

Structure Matrix for Exercise of Self-Care Agency 2

	Component			
	1	2	3	4
I am a good friend to myself.	.906	.573		
I deserve all the time and care it takes to maintain my health.	.899			
I take pride in doing the things I need to do in order to remain healthy.	.829	.652		
I expect to reach my peak wellness.	.825	.616		
Life is a joy.	.702		.575	
I often put off doing things that I know would be good for me.	.529	.842		
I often feel that I lack the energy to care for my health needs the way I would like to.	.567	.834		
I rarely carry out the resolutions I make concerning my health.		.820		
I take good care of myself.	.675	.788		
I have a planned program for rest and exercise.	.567	.759		
I eat a balanced diet.		.743	.545	
I seek information to care for myself.			.849	
I take responsibility for my own actions.			.830	
I look for better ways to look after my health.	.566	.606	.816	
I have little to contribute to others.				.882
I do not contribute to my family's functioning.				.874

Note: Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979). Extraction Method was Principal Component Analysis. Rotation Method was Promax with Kaiser Normalization.

Table 29

Component Correlation Matrix for Exercise of Self-Care Agency 2

Component	1	2	3	4
1	1.000	.620	.409	-.074
2	.620	1.000	.441	.005
3	.409	.441	1.000	-.116
4	-.074	.005	-.116	1.000

Note. Extraction Method was Principal Component Analysis. Rotation Method was Promax with Kaiser Normalization.

Once the items were grouped into factors, descriptive statistics were calculated for each of the new factors of the Exercise of Self-Care Agency 2 Scale. The descriptive statistics can be seen in Tables 30 through 34. The reliability index for the Exercise of Self-Care Agency 2 Scale was .905 which included 16 items on the scale. The mean for the Exercise of Self-Care Agency Scale, revised for this study (Exercise of Self-Care Agency 2 Scale), was 44.80 and the standard deviation was 11.095. The Exercise of Self-Care Agency 2 Scale was used as the exercise of self-care agency 2 variable.

Reliability Index Exercise of Self-Care Agency 2

The reliability statistics for the exercise of self-care agency 2 were calculated. Analyses can be viewed in Tables 30 through 34.

Table 30

Reliability Statistics for Exercise of Self-Care Agency 2

Cronbach's Alpha	N of Items
.905	16

Table 31

Item Statistics for Exercise of Self-Care Agency 2

	Mean	Std. Deviation	N
I often feel that I lack the energy to care for my health needs the way I would like to.	1.48	1.260	46
I take pride in doing the things I need to do in order to remain healthy.	2.91	1.132	46
I often put off doing things that I know would be good for me.	1.74	1.437	46
I look for better ways to look after my health.	3.11	.823	46
I expect to reach my peak wellness.	2.74	1.144	46
I deserve all the time and care it takes to maintain my health.	2.83	1.141	46
I rarely carry out the resolutions I make concerning my health.	2.59	1.185	46
I am a good friend to myself.	2.74	1.084	46
I take good care of myself.	2.76	1.015	46
I have a planned program for rest and exercise.	2.41	1.257	46
I seek information to care for myself.	3.15	.894	46
Life is a joy.	3.15	.842	46
I eat a balanced diet.	2.57	1.205	46
I do not contribute to my family's functioning.	3.35	1.079	46
I have little to contribute to others.	3.61	.881	46
I take responsibility for my own actions.	3.67	.598	46

Note. Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 32

Item-Total Statistics for Exercise of Self-Care Agency 2

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation
I often feel that I lack the energy to care for my health needs the way I would like to.	43.33	102.714	.736
I take pride in doing the things I need to do in order to remain healthy.	41.89	104.232	.761
I often put off doing things that I know would be good for me.	43.07	101.129	.689
I look for better ways to look after my health.	41.70	110.794	.671
I expect to reach my peak wellness.	42.07	105.796	.680
I deserve all the time and care it takes to maintain my health.	41.98	106.733	.639
I rarely carry out the resolutions I make concerning my health.	42.22	104.396	.714
I am a good friend to myself.	42.07	106.418	.693
I take good care of myself.	42.04	106.309	.753
I have a planned program for rest and exercise.	42.39	104.599	.658
I seek information to care for myself.	41.65	112.099	.539
Life is a joy.	41.65	110.987	.642
I eat a balanced diet.	42.24	107.475	.567
I do not contribute to my family's functioning.	41.46	121.365	.024
I have little to contribute to others.	41.20	119.094	.168
I take responsibility for my own actions.	41.13	117.849	.376

Note. Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 33

Item-Total Statistics for Exercise of Self-Care Agency 2

	Cronbach's Alpha if Item Deleted
I often feel that I lack the energy to care for my health needs the way I would like to.	.893
I take pride in doing the things I need to do in order to remain healthy.	.893
I often put off doing things that I know would be good for me.	.895
I look for better ways to look after my health.	.897
I expect to reach my peak wellness.	.896
I deserve all the time and care it takes to maintain my health.	.897
I rarely carry out the resolutions I make concerning my health.	.894
I am a good friend to myself.	.895
I take good care of myself.	.894
I have a planned program for rest and exercise.	.896
I seek information to care for myself.	.901
Life is a joy.	.898
I eat a balanced diet.	.900
I do not contribute to my family's functioning.	.917
I have little to contribute to others.	.910
I take responsibility for my own actions.	.905

Note. Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 34

Scale Statistics for Exercise of Self-Care Agency 2

Mean	Variance	Std. Deviation	N of Items
44.80	123.094	11.095	16

Reliability of Exercise of Self-Care Agency 2 Using the Even/Odd Split-Half Method

For the Exercise of Self-Care Agency 2 Scale, the internal consistency was also

determined through the split-half method of analysis. The reliability indices were

calculated using even/odd item analysis and normal order item analysis including the

Spearman-Brown Coefficient compared to the Cronbach's Alpha Reliability Statistics.

This new revised scale consisted of 16 items. The total reliability score of the Cronbach's

Alpha, using the even/odd split-half method, was .905 with reliability for Part 1 of .790,

($M = 20.13$, $SD = 7.154$) containing 8 of the 16 items, and a reliability for Part 2 of .877

($M = 60.24.67$, $SD = 4.576$) containing 8 of the 16 items. The correlation between the two

forms was .772. The Spearman-Brown Unequal Length Coefficient was .871 and the

Guttman Split-Half Coefficient was .871. The reliability analyses can be seen in Tables

35 through 40.

Table 35

Reliability Statistics for Exercise of Self-Care Agency 2

Cronbach's Alpha	N of Items
.905	16

Table 36

Scale Statistics for Exercise of Self-Care Agency *2*

Mean	Variance	Std. Deviation	N of Items
44.80	123.094	11.095	16

Table 37

Split-Half Reliability Statistics: Normal Order Item Analysis for Exercise of Self-Care Agency 2

Cronbach's Alpha	Part 1	Value	.902
		N of Items	8[a]
	Part 2	Value	.713
		N of Items	8[b]
	Total N of Items		16
Correlation Between Forms			.779
Spearman-Brown	Equal Length		.876
Coefficient	Unequal Length		.876
Guttman Split-Half Coefficient			.828

Table 38

Split-Half Scale Statistics for Exercise of Self-Care Agency 2

	Mean	Variance	Std. Deviation	N of Items
Part 1	20.13	51.183	7.154	8[a]
Part 2	24.67	20.936	4.576	8[b]
Both Parts	44.80	123.094	11.095	16

Table 39

Split-Half Reliability Statistics: Even/Odd Item Order Analysis for Exercise of Self-Care

Agency 2

Cronbach's Alpha	Part 1	Value	.790
		N of Items	8[a]
	Part 2	Value	.877
		N of Items	8[b]
	Total N of Items		16
Correlation Between Forms			.772
Spearman-Brown	Equal Length		.871
Coefficient	Unequal Length		.871
Guttman Split-Half Coefficient			.871

Table 40

Split-Half Scale Statistics for Exercise of Self-Care Agency 2

	Mean	Variance	Std. Deviation	N of Items
Part 1	21.63	32.994	5.744	8[a]
Part 2	23.17	36.502	6.042	8[b]
Both Parts	44.80	123.094	11.095	16

Self-care agency was factored looking for its four original subconstructs or dimensions for analysis. Items loaded on its four dimensions.

Factor 1: Reliability Index

The reliability statistics for the Factor 1 (M = 14.37, SD = 4.52) contained 5 items: (ag5, ag18, ag20, ag26, ag31). The reliability statistics (Cronbach's Alpha = 89.7) were calculated as seen in Tables 41 through 45.

Table 41

Reliability Statistics for Factor 1

Cronbach's Alpha	N of Items
.897	5

Note. Extraction Method was Principal Component Analysis.

Table 42

Item Statistics for Factor 1

	Mean	Std. Deviation	N
I take pride in doing the things I need to do in order to remain healthy.	2.91	1.132	46
I expect to reach my peak wellness.	2.74	1.144	46
I deserve all the time and care it takes to maintain my health.	2.83	1.141	46
I am a good friend to myself.	2.74	1.084	46
Life is a joy.	3.15	.842	46

Note. Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 43

Item-Total Statistics for Factor 1

	Scale Mean if Item Deleted	Scale Variance if Item Deleted
I take pride in doing the things I need to do in order to remain healthy.	11.46	12.965
I expect to reach my peak wellness.	11.63	13.083
I deserve all the time and care it takes to maintain my health.	11.54	12.698
I am a good friend to myself.	11.63	12.860
Life is a joy.	11.22	15.552

Note. Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 44

Item-Total Statistics for Factor 1

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I take pride in doing the things I need to do in order to remain healthy.	.762	.871
I expect to reach my peak wellness.	.734	.878
I deserve all the time and care it takes to maintain my health.	.794	.864
I am a good friend to myself.	.826	.856
Life is a joy.	.632	.899

Note. Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 45

Scale Statistics for Factor 1

Mean	Variance	Std. Deviation	N of Items
14.37	20.460	4.523	5

Factor 2: Reliability Index

The reliability statistics for the Factor 2 were calculated. Factor 2 (M = 9.93, SD = 1.982) contained 6 items: (ag3r, ag10r, ag15, ag25r, ag27, ag29). The reliability statistics (Cronbach's Alpha = 89.7) were calculated as seen in Tables 46 through 50.

Table 46

Reliability Statistics for Factor 2

Cronbach's Alpha	N of Items
.886	6

Table 47

Item Statistics for Factor 2

	Mean	Std. Deviation	N
I often feel that I lack the energy to care for my health needs the way I would like to.	1.48	1.260	46
I often put off doing things that I know would be good for me.	1.74	1.437	46
I eat a balanced diet.	2.57	1.205	46
I rarely carry out the resolutions I make concerning my health.	2.59	1.185	46
I take good care of myself.	2.76	1.015	46
I have a planned program for rest and exercise.	2.41	1.257	46

Note. Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 48

Item-Total Statistics for Factor 2

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation
I often feel that I lack the energy to care for my health needs the way I would like to.	12.07	23.885	.763
I often put off doing things that I know would be good for me.	11.80	22.694	.739
I eat a balanced diet.	10.98	25.977	.606
I rarely carry out the resolutions I make concerning my health.	10.96	25.020	.713
I take good care of myself.	10.78	26.263	.729
I have a planned program for rest and exercise.	11.13	24.783	.680

Note: Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 49

Item-Total Statistics for Factor 2

	Cronbach's Alpha if Item Deleted
I often feel that I lack the energy to care for my health needs the way I would like to.	.856
I often put off doing things that I know would be good for me.	.861
I eat a balanced diet.	.881
I rarely carry out the resolutions I make concerning my health.	.865
I take good care of myself.	.865
I have a planned program for rest and exercise.	.870

Note: Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 50

Scale Statistics for Factor 2

Mean	Variance	Std. Deviation	N of Items
13.54	34.876	5.906	6

Factor 3 Reliability Index

The reliability statistics for the Factor 3 were calculated. Factor 3 (M =9.93, SD = 1.982) contained 3 items: (ag33, ag40, ag17). The reliability statistics (Cronbach's Alpha = .800) were calculated as seen in Tables 51 through 55.

Table 51

Reliability Statistics for Factor 3

Cronbach's Alpha	N of Items
.800	3

Table 52

Item Statistics for Factor 3

	Mean	Std. Deviation	N
I take responsibility for my own actions.	3.67	.598	46
I seek information to care for myself.	3.15	.894	46
I look for better ways to look after my health.	3.11	.823	46

Note: Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 53

Item-Total Statistics for Factor 3

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation
I take responsibility for my own actions.	6.26	2.508	.561
I seek information to care for myself.	6.78	1.507	.740
I look for better ways to look after my health.	6.83	1.747	.692

Note: Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 54

Item-Total Statistics for Factor 3

	Cronbach's Alpha if Item Deleted
I take responsibility for my own actions.	.824
I seek information to care for myself.	.627
I look for better ways to look after my health.	.676

Note: Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 55

Scale Statistics for Factor 3

Mean	Variance	Std. Deviation	N of Items
9.93	3.929	1.982	3

Factor 4: Reliability Index

The reliability statistics for the Factor 4 were calculated. Factor 4 (M =9.93, SD = 1.982) contained 3 items: (ag32r, ag34r). The reliability statistics (Cronbach's Alpha = .76.8) were calculated as seen in Tables 56 through 60.

Table 56

Reliability Statistics for Factor 4

Cronbach's Alpha	N of Items
.768	2

Table 57

Item Statistics for Factor 4

	Mean	Std. Deviation	N
I do not contribute to my family's functioning.	3.35	1.079	46
I have little to contribute to others.	3.61	.881	46

Note: Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979)

Table 58

Item-Total Statistics for Factor 4

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation
I do not contribute to my family's functioning.	3.61	.777	.637
I have little to contribute to others.	3.35	1.165	.637

Note: Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 59

Item-Total Statistics for Factor 4

	Cronbach's Alpha if Item Deleted
I do not contribute to my family's functioning.	.
I have little to contribute to others.	.

Note: Items are from the original Exercise of Self-Care Agency Scale (Kearney & Fleischer, 1979).

Table 60

Scale Statistics for Factor 4

Mean	Variance	Std. Deviation	N of Items
6.96	3.154	1.776	2

Descriptive Statistics for the Exercise of Self-Care Agency 2

For the exercise of self-care agency 2 there was no missing data in the final dataset and any missing values were replaced with the neutral response of "no opinion" built into the scale by the author. For this dataset, the independent variable, the exercise of self-care agency 2 was normally distributed: (Shapiro Wilk: df(46) = .972, p = .340), and the value of the Shapiro Wilk Test of Normality exceeded the .05 level of significance signaling that the dependent variable was normally The histogram showed the distribution of the data, the Q-Q Plot showed that the relationship of the data points to the line, and the boxplot did not reveal any extreme outliers.

Factor 1 Descriptive Statistics

For Factor 1, the Cronbach's alpha value was .897 consisting of five items: (M =

14.37; SD = 4.523). There were no missing values in the final data set. Missing values in

the dataset were replaced with the neutral response of "no opinion" built into the scale by

the author. For this dataset, the independent variable, self-care agency, was not normally

distributed: (Shapiro Wilk: df(46) = .930, p = .008), and the value of the Shapiro Wilk

Test of Normality did exceed the .05 level of significance signaling that the dependent

variable was not normally distributed. However, the Kolmogorov-Smirnov did suggest

normality for this variable. The histogram in showed the distribution of the data, the Q-Q

and did not reveal any extreme outliers.

Factor 2 Descriptive Statistics

For Factor 2, the Cronbach's alpha value was .886 consisting of six items: (M =

13.54; SD = 5.906). There were no missing values in the final data set. Missing values in

the dataset were also replaced with the neutral response of "no opinion" built into the

scale by the author. For this dataset, the independent variable, self-care agency, was

normally distributed (Shapiro Wilk: df(46) = .962, p = .137), and the value of the Shapiro

Wilk Test of Normality exceeded the .05 level of significance signaling that the

dependent variable was normally distributed. The histogram showed the distribution of

the data; the Q-Q Figure showed that the relationship of the data points to the line, and

the boxplot did not reveal any extreme outliers.

Factor 3 Descriptive Statistics

For Factor 3, the Cronbach's alpha value was .800 consisting of three items: ($M =$ 9.98; $SD =$ 1.84). There were no missing values in the final data set. Missing values in the dataset were replaced with the neutral response of "no opinion" built into the scale by the author. Extreme outliers in this dataset were winsorized back to the next outlier not considered extreme. For this dataset, the independent variable, self-care agency, was not normally distributed: (Shapiro Wilk: $df(46) =$ .837, $p =$ .000), and the value of the Shapiro Wilk Test of Normality did not exceed the .05 level of significance signaling that the dependent variable was not normally distributed. The histogram showed the distribution of the data; the Q-Q Plot showed that the relationship of the data points to the line; and the box and whiskers plot did not reveal any extreme outliers. Outliers were present in the data, but they did not reach the extreme level.

Factor 4 Descriptive Statistics

Factor 4, the Cronbach's alpha value was .768 consisting of two items: (M: 6.96; SD: 1.776). There were no missing values in the final data set. Missing values in the dataset were replaced with the neutral response of "no opinion" built into the scale by the author. Extreme outliers in this dataset were winsorized back to the next outlier not considered extreme. For this dataset, the independent variable, self-care agency, was normally distributed (Shapiro Wilk: df(46) = .741, p = .000), and the value of the Shapiro Wilk Test of Normality did not exceeded the .05 level of significance signaling that the dependent variable was not normally distributed. The histogram showed the distribution of the data; the Q-Q Plot showed that the relationship of the data points to the line; and

the boxplot did not reveal any extreme outliers. Outliers were present in the data, but they did not reach the extreme level as revealed in the table.

In Part 1 of this study the sample size of 46 participants was small. I was able to perform linear regression and multiple regression analyses, but the sample size was too small in Part 2 to adequately analyze the raw data with Hayes' Moderation Regression format. Simple linear regression and multiple regression analyses were used to predict compassion satisfaction based on the exercise of self-care agency in Part 1 of this study. The Group effect and the Time effect were examined with repeated measures ANOVAs and paired sample *t* tests, and general linear model of univariate tests were used to analyze the effect of the informational module on the posttest scores in the Part 2 of the study.

The Exercise of Self-Care Agency and Compassion Satisfaction (H_a1_1)

RQ1-Quantative: Is there a statistically significant linear relationship between self-care agency and compassion satisfaction in the population under study?

- H_a1_1: The results showed that there was a statistically significant positive, linear relationship between self-care agency and compassion satisfaction.

  $F(1, 44) = 7.215$, $p = .010$, $R = .375$, $R^2 = .141$, adjusted $R^2 = .121$, observed power $= .748$. Analyses can be seen in Tables 61 through 62.

Table 61

Coefficients: Compassion Satisfaction and the Exercise of Self-Care Agency

Model	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	B	Std. Error	Beta	*t*	Sig.	Lower Bound	Upper Bound
1 (Constant)	31.233	7.122		4.385	.000	16.880	45.587
ESCA *t* score	.375	.140	.375	2.686	.010	.094	.657

Note. Dependent Variable was compassion satisfaction *t* score.

Table 62

Bootstrap for Coefficients: Compassion Satisfaction and the Exercise of Self-Care Agency

Model	Bootstrap				BCa 95% Confidence Interval	
	B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1 (Constant)	31.233	-.890	7.346	.002	14.845	43.17
ESCA t score	.375	.015	.139	.016	.123	.692

Note. Bootstrap results are based on 1000 bootstrap samples.

Exercise of Self-Care Agency 2 and Compassion Satisfaction (H_a1_2)

Based on the significance of the relationship between self-care agency and compassion satisfaction, further analyses of these variables were conducted using factor analysis to determine which components of the variable self-care agency contributed to the significance of its relationship to compassion satisfaction. The first research question was rephrased to include the revised scale to be called Exercise of Self-Care Agency 2:

RQ1-Quantative: Is there a statistically significant linear relationship between the exercise of self-care agency 2 (revised for this study) and compassion satisfaction?

- H_a1_2: There was a statistically significant linear relationship between the exercise of self-care agency 2 (revised for this study) and compassion satisfaction.

  $F(1, 44) = 9.112$, $p = .004$, $R = .414$, $R^2 = .172$, adjusted $R^2 = .153$,

  observed power $= .839$.

- The results showed that for this additional revised research question, the null hypothesis has been rejected in favor of the alternate hypothesis. There was a statistically significant positive, linear relationship between the exercise of self-care agency 2 and compassion satisfaction. Analyses can be seen in Tables 63 through 64.

Table 63

Coefficients: Exercise of Self-Care Agency 2 and Compassion Satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1 (Constant)	29.290	6.994		4.188	.000	15.195	43.385
ESCA2 t score	.414	.137	.414	3.019	.004	.138	.691

Note. Dependent variable was compassion satisfaction *t* score.

Table 64

Bootstrap for Coefficients: Exercise of Self-Care Agency 2 and Compassion Satisfaction

		Bootstrap			BCa 95% Confidence Interval	
Model	B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1 (Constant)	29.29	-.260	7.22	.001	16.497	41.997
ESCA2 t score	.414	.005	.140	.007	.103	.694

Note. Bootstrap results are based on 1000 bootstrap samples.

The research now focused on determining which factors of self-care agency predicted compassion satisfaction. The hypotheses now centered on the four factors of the Exercise of Self-Care Agency 2 Scale.

Motivation/Initiative and Responsibility (Factor 1) and Compassion Satisfaction (H_a1_3)

- H_a1_3: There is a statistically significant linear relationship between motivation/initiative and responsibility (Factor 1) and compassion satisfaction in the population under study.

    The results showed: $F(1, 44) = 5.696$, $p = .021$

    $R = .339$, $R^2 = .115$, adjusted $R^2 = .094$, observed power = .646. The null hypothesis has been rejected in favor of the alternate hypothesis. There was a statistically significant positive, linear relationship between Factor 1 and compassion satisfaction. Analyses can be seen in Tables 65 through 66.

Table 65

Coefficients: Compassion Satisfaction and Factor 1

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	33.072	7.23		4.574	.000	18.501	47.644
	FACTOR1 t score	.339	.142	.339	2.387	.021	.053	.624

Note. Dependent variable was compassion satisfaction *t* score.

Table 66

Bootstrap for Coefficients: Compassion Satisfaction and Factor 1

Model		Bootstrap					
						BCa 95% Confidence Interval	
		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	33.07	-.486	7.85	.002	16.91	46.89
	FACTOR1 t score	.339	.008	.151	.032	.041	.698

Note. Bootstrap results are based on 1000 bootstrap samples.

An Active Versus a Passive Response to Situations (Factor 2) and Compassion Satisfaction (H_a1_4)

- H_a1_4: There was a statistically significant linear relationship between an active versus a passive response to situations (Factor 2) and compassion satisfaction in the population under study. For this hypothesis, the null hypothesis has been rejected in favor of the alternate hypothesis. The results showed:

  $F(1, 44) = 7.515$, $p = .009$, $R = .382$, $R^2 = .146$, adjusted $R^2 = .126$, observed

power = .765. There was a statistically significant positive, linear relationship

between variables Factor 2 and compassion satisfaction. Analyses can be seen in

Tables 67 through 68.

Table 67

Coefficients of Compassion Satisfaction and Factor 2

Model	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	B	Std. Error	Beta	*t*	Sig.	Lower Bound	Upper Bound
1 (Constant)	30.903	7.101		4.352	.000	16.591	45.214
FACTOR2 *t* score	.382	.139	.382	2.741	.009	.101	.663

Table 68

Bootstrap for Coefficients of Compassion Satisfaction and Factor 2

Model	Bootstrap				BCa 95% Confidence Interval	
	B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1 (Constant)	30.90	-.020	6.335	.001	18.935	43.757
FACTOR2 *t* score	.382	-.001	.125	.004	.115	.622

Note. Bootstrap results are based on 1000 bootstrap samples.

Knowledge and Information Seeking (Factor 3) and Compassion Satisfaction ($H_0 1_5$)

- $H_0 1_5$: There was not a statistically significant linear relationship between

  knowledge and information seeking (Factor 3) and compassion satisfaction in the

  population under study.

$F(1, 44) = 1.103$, $p = .299$. For this research question, the null hypothesis

has been accepted. There was not a statistically significant linear relationship

between variables in knowledge and information seeking (Factor 3). Analyses can

be seen in Tables 69 through 70.

Table 69

Coefficients for Compassion Satisfaction and Factor 3

		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
Model		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	42.180	7.589		5.558	.000	26.885	57.476
	FACTOR3 t score	.156	.149	.156	1.050	.299	-.144	.456

Note. Dependent variable was compassion satisfaction *t* score.

Table 70

Bootstrap for Coefficients for Compassion Satisfaction and Factor 3

		Bootstrap				BCa 95% Confidence Interval	
Model		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	42.18	.017	7.367	.001	24.907	56.504
	FACTOR3 t score	.156	-.002	.147	.274	-.096	.432

Note. Bootstrap results are based on 1000 bootstrap samples.

Self-Worth, Self-Esteem, and Self-Concept (Factor 4) and Compassion Satisfaction

(H_a1_6)

- H_a1_6: There was a statistically significant linear relationship between self-worth, self-esteem, and self-concept (Factor 4) and compassion satisfaction in the population under study.

    $F(1, 44) = 4.21, p = .046, R = .296, R^2 = .087$, adjusted $R^2 = .067$, observed

power = .519.

- $H4_a$: For this research question, the null hypothesis has been rejected in favor of the alternate hypothesis. There was a statistically significant positive, linear relationship between variables self-worth, self-esteem, and self-concept (Factor 4) and compassion satisfaction. Analyses can be seen in Tables 71 through 72.

Table 71

Coefficients: Factor 4 and Compassion Satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	B	Std. Error	Beta	*t*	Sig.	Lower Bound	Upper Bound
1 (Constant)	35.218	7.340		4.798	.000	20.425	50.012
FACTOR4 *t* score	.296	.144	.296	2.053	.046	.005	.586

Note. Dependent variable was compassion satisfaction *t* score.

Table 72

Bootstrap for Coefficients: Factor 4 and Compassion Satisfaction

Model		B	Bootstrap			BCa 95% Confidence Interval	
			Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	35.22	.321	8.084	.001	17.702	53.762
	FACTOR4 *t* score	.296	-.006	.154	.049	.023	.567

Note. Bootstrap results are based on 1000 bootstrap samples.

Model Summary of Linear Regression of Exercise of Self-Care Agency and

Compassion Satisfaction

A summary of the analyses of linear regression conducted between the exercise of self-care agency and compassion satisfaction is shown in Table 73. Each of the factors is shown with their observed power and significance. A multiple regression analysis was also conducted on the factors found to have a significant relationship with compassion satisfaction.

Table 73

Model Summary: Linear Regression for the Factors of the Exercise of Self-Care Agency and Compassion Satisfaction

					Change Statistics					
Var.	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Power
ESCA	.375	.141	.121	9.37	.141	7.22	1	44	.010	.748
ESCA 2	**.414**	**.172**	**.153**	**9.21**	**.172**	**9.12**	**1**	**44**	**.004**	**.839**
Factor 1	.339	.115	.094	9.52	.115	5.7	1	44	.021	.646
Factor 2	.382	.146	.126	9.35	.146	7.52	1	44	.009	.765
Factor 3	.156	.024	.002	9.99	.024	1.10	1	44	.229	.177
Factor 4	.296	.087	.067	9.67	.087	4.21	1	44	.046	.519

Note. Dependent variable was compassion satisfaction.

A multiple regression analysis was conducted on the data to determine the best linear combination of factors for predicting compassion satisfaction from the Exercise of Self-Care Agency and Exercise of Self-Care Agency 2 Scales. The assumptions for linearity regression for the variables had already been met with simple linear regression on each of the factors. The best model for predicting compassion satisfaction was a combination of motivation /initiative and responsibility (Factor 1) and self-worth, self-esteem, self-concept (Factor 4): ($F(2, 43) = 5.668$, $p = .007$, $R = .457$; $R^2 = .209$; adjusted $R^2 = .172$, observed power = .837 which were both significant individually in predicting compassion satisfaction in the study population.

In this multiple regression analysis, both Factor 1, ($t(43) = 2.556$, $p = .014$), and Factor 4, ($t(43) = .2.260$, $p = .029$) assisted in the prediction of compassion satisfaction.

The Beta weights suggested that Factor 1 contributed the largest amount (.348) or 34.8 %

of the unique variance with Factor 4 (.307) contributed 30.7 % the unique variance to the

model. Analyses can be seen in Table 74.

Table 74

Multiple Regression Analysis Summary of Compassion Satisfaction

Variable	*B*	*SEB*	β
Factor 1	.348	.136	.348
Factor 4	.307	.136	.307

Note: $R = .457$; $R^2 = .209$; adjusted $R^2 = .172$; $F(2, 43) = 5.688$; $p = .007$, observed power $= .837$.

Secondary Traumatic Stress

Stamm (2010) proposed that secondary traumatic stress is the work- related

exposure of the licensed professional social workers to clients who have experienced

extremely or traumatically stressful events. These helping individuals my repeatedly hear

the stories of traumatic things that happen to clients, and in some cases, these helpers

may begin to have difficulty sleeping, have upsetting images enter their minds, or may

begin to avoid things that remind them of the events they have heard about (p. 17).

Stamm also proposed that secondary traumatic stress and vicarious traumatization share

many similar characteristics (p. 13).

When comparing the scores from this study to the scores reported in the ProQOL

manual, the manual reported an alpha level of .81. The alpha level for secondary

traumatic stress ($M = 21.41$, $SD = 5.26$) in this study was .799. It was also reported that a

raw score of 22 or lower on the Secondary traumatic stress discrete scale tends to indicate

a low level of secondary traumatic stress. When treated as one unit, secondary traumatic

stress was low for this group. Analyses can be seen in Tables 75 through 78.

Reliability Index for Secondary Traumatic Stress

Table 75

Reliability Statistics for Secondary Traumatic Stress

Cronbach's Alpha	N of Items
.799	10

Table 76

Item Statistics for Secondary Traumatic Stress

	Mean	Std. Deviation	N
I am preoccupied with more than one person I help.	2.87	.885	46
I jump or am startled by unexpected sounds.	2.63	.878	46
I find it difficult to separate my personal life from my life as a helper.	2.63	1.062	46
I think that I might have been affected by the traumatic stress of those I help.	2.17	.825	46
Because of my helping, I have felt "on edge" about various things.	2.28	1.026	46
I feel depressed because of the traumatic experiences of the people I help.	1.91	.755	46
I feel as though I am experiencing the trauma of someone I have helped.	1.67	.762	46
I avoid certain activities or situations because they remind me of frightening experiences of the people I help.	1.70	.813	46
As a result of my helping, I have intrusive, frightening thoughts.	1.57	.834	46
I can't recall important parts of my work with trauma victims.	1.98	.931	46

Note: Items are from the Professional Quality of Life's secondary traumatic stress scale (Stamm, 2009).

Table 77

Item-Total Statistics for Secondary Traumatic Stress

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I am preoccupied with more than one person I help.	18.54	24.298	.302	.801
I jump or am startled by unexpected sounds.	18.78	24.574	.272	.804
I find it difficult to separate my personal life from my life as a helper.	18.78	22.129	.446	.786
I think that I might have been affected by the traumatic stress of those I help.	19.24	23.030	.506	.778
Because of my helping, I have felt "on edge" about various things.	19.13	20.649	.645	.758
I feel depressed because of the traumatic experiences of the people I help.	19.50	22.833	.597	.769
I feel as though I am experiencing the trauma of someone I have helped.	19.74	22.330	.667	.762
I avoid certain activities or situations because they remind me of frightening experiences of the people I help.	19.72	23.052	.513	.777
As a result of my helping, I have intrusive, frightening thoughts.	19.85	22.621	.554	.772
I can't recall important parts of my work with trauma victims.	19.43	23.985	.314	.800

Note: Items are from the Professional Quality of Life's secondary traumatic stress scale (Stamm, 2009).

Table 78

Scale Statistics for Secondary Traumatic Stress

Mean	Variance	Std. Deviation	N of Items
21.41	27.714	5.264	10

Descriptive Statistics for Secondary Traumatic Stress

Because the ProQOL Scale is composed of three discrete scales- compassion satisfaction, secondary traumatic stress, and burnout- data was also gathered for all the three factors. The first hypothesis was also applied to this data from the completed ProQOL. The results were discussed based on hypothesis *H1*.

The Exercise of Self-Care Agency and Secondary Traumatic Stress (H_a1_7)

RQ1-Quantative: Is there a statistically significant linear relationship between the exercise of self-care agency and secondary traumatic stress in the population under study?

- H_a1_7: There was a statistically significant negative, linear relationship between the exercise of self-care agency and secondary traumatic stress in the population under study.

    $F(1, 44) = 5.525, p = .023, R = -.334, R^2 = .112$, adjusted $R^2 = .091$, observed power = .663.

- The null hypothesis was rejected in favor of the alternate hypothesis. The results were bootstrapped to support findings. The results were observed in Tables 79 through 80.

Table 79

Coefficients: Exercise for Self-Care Agency and Secondary Traumatic Stress

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	*t*	Sig.	Lower Bound	Upper Bound
1	(Constant)	66.70	7.243		9.21	.000	52.105	81.298
	ESCA *t* score	-.334	.142	-.334	-2.4	.023	-.620	-.048

Note. Dependent variable was secondary traumatic stress *t* score.

Table 80

Bootstrap for Coefficients for Exercise of Self-Care Agency *and Secondary Traumatic Stress*

Model		Bootstrap				BCa 95% Confidence Interval	
		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	66.7	-.231	8.129	.001	50.951	82.072
	ESCA t score	-.334	.006	.155	.038	-.646	-.004

Note. Bootstrap results are based on 1000 bootstrap samples.

Exercise of Self-Care Agency 2 and Secondary Traumatic Stress (H$_a$1$_8$)

RQ1-Quantative: Is there a statistically significant linear relationship between the exercise of self-care agency 2 (revised for this study) and secondary traumatic stress in the population under study?

- H$_a$1$_8$: There was a statistically significant negative, linear relationship between the exercise of self-care agency 2 (revised for this study) and secondary traumatic stress in the population under study.

  $F(1, 44) = 6.225, p = .016.$

$$R = -.353, R^2 = .124, \text{ adjusted } R^2 = .105, \text{ observed power} = .687.$$

- The null hypothesis was rejected in favor of the alternate hypothesis. The results were observed in Tables 81 through 82.

Table 81

Coefficients: Exercise for Self-Care Agency 2 and Secondary Traumatic Stress

Model		*B*	Std. Error	Beta	*t*	Sig.	Lower Bound	Upper Bound
		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
1	(Constant)	67.64	7.19		9.41	.000	53.15	82.13
	ESCA2 *t* score	-.353	.141	-.353	-2.5	.016	-.637	-.069

Note. Dependent variable was secondary traumatic stress *t* score.

Table 82

Bootstrap for Coefficients for Exercise of Self-Care Agency 2 and Secondary Traumatic Stress

Model		*B*	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
			Bootstrap			BCa 95% Confidence Interval	
1	(Constant)	67.64	.458	7.898	.001	51.316	83.362
	ESCA2 *t* score	-.353	-.007	.151	.027	-.622	-.069

Note. Bootstrap results are based on 1000 bootstrap samples.

The research next focused on determining which factors of self-care agency predicted secondary traumatic stress. The hypotheses now centered on the four factors of self-care agency 2.

Motivation/Initiative and Responsibility (Factor 1) and Secondary Traumatic Stress

(H_a1_9)

- H_a1_9: There was a statistically significant linear relationship between

  motivation/initiative and responsibility (Factor 1) and secondary traumatic stress

  in the population under study. The results showed:

  $F(1, 44) = 4.958$, $p = .031$.

  $R = -.318$, $R^2 = .101$, adjusted $R^2 = .081$, observed power = .586.

- The null hypothesis has been rejected in favor of the alternate hypothesis. The

  results were observed in Tables 83 through 84.

Table 83

Coefficients for Factor 1 and Secondary Traumatic Stress

Model	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	B	Std. Error	Beta	*t*	Sig.	Lower Bound	Upper Bound
1 (Constant)	65.91	7.284		9.05	.000	51.232	80.593
FACTOR1 *t* score	-.318	.143	-.318	-2.23	.031	-.606	-.030

Note. Dependent variable was secondary traumatic stress *t* score.

Table 84

Bootstrap for Coefficients for Factor 1 and Secondary Traumatic Stress

		Bootstrap			BCa 95% Confidence Interval	
Model	*B*	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1 (Constant)	65.91	.110	7.35	.001	48.933	79.397
FACTOR1 *t* score	-.318	-.003	.144	.034	-.564	-.036

Note. Bootstrap results are based on 1000 bootstrap samples.

An Active Versus a Passive Response to Situations (Factor 2) and Secondary Traumatic Stress (H_a1_{10})

- H_a1_{10}: There was a statistically significant relationship between an active versus a passive response to situations (Factor 2) and secondary traumatic stress in the population under study. The results showed:

    $F(1, 44) = 6.190$, $p = .017$, $R = -.351$, $R^2 = .123$, adjusted $R^2 = .103$, observed

power = .682.

- The null hypothesis has been rejected in favor of the alternate hypothesis. The results were observed in Tables 85 through 86.

Table 85

Coefficients for Factor 2 and Secondary Traumatic Stress

	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
Model	*B*	Std. Error	Beta	*t*	Sig.	Lower Bound	Upper Bound
1 (Constant)	67.56	7.194		9.39	.000	53.060	82.059
FACTOR2 *t* score	-.351	.141	-.351	-2.49	.017	-.636	-.067

Note. Dependent variable was secondary traumatic stress *t* score.

Table 86

Bootstrap for Coefficients for Factor 2 and Secondary Traumatic Stress

	Bootstrap				BCa 95% Confidence Interval	
Model	*B*	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1 (Constant)	67.56	-.157	7.032	.001	52.621	80.531
FACTOR2 *t* score	-.351	.004	.135	.016	-.602	-.072

Note. Bootstrap results are based on 1000 bootstrap samples.

Knowledge and Information Seeking (Factor 3) and Secondary Traumatic Stress

($H_0 1_{11}$)

- $H_0 1_{11}$: There was not a statistically significant linear relationship between

  knowledge and information seeking (Factor 3) and secondary traumatic stress.

  The results showed: $F(1, 44) = .071$, $p = .790$. The null hypothesis was accepted.

Self-Worth, Self-Esteem, and Self-Concept (Factor 4) and Secondary Traumatic

Stress (H_a1_{12})

- H_a1_{12}: There was a statistically significant linear relationship between self-worth, self-esteem, and (Factor 4) and secondary traumatic stress in the population under study: The results showed: $F(1, 44) = 5.766$, $p = .021$, $R = -.340$, $R^2 = .116$, adjusted $R^2 = .096$, observed power $= .651$. The null hypothesis was rejected in favor of the alternate hypothesis. The results were observed in Tables 87 through 88.

Table 87

Coefficients for Factor 4 and Secondary Traumatic Stress

Model		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
1	(Constant)	67.02	7.225		9.276	.000	52.458	81.580
	FACTOR4 t score	-.340	.142	-.340	-2.40	.021	-.626	-.055

Note. Dependent variable was secondary traumatic stress *t* score.

Table 88

Bootstrap for Coefficients for Factor 4 and Secondary Traumatic Stress

		Bootstrap			BCa 95% Confidence Interval	
Model	*B*	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1 (Constant)	67.019	1.053	7.794	.001	52.975	87.599
FACTOR4 *t* score	-.340	-.019	.155	.027	-.651	-.095

Note. Bootstrap results are based on 1000 bootstrap samples.

Multiple Regression of Secondary Traumatic Stress and Factors of Self-Care

Agency 2

A multiple regression analysis showed that there was a statistically significant relationship between the Factor1 (motivation /initiative and responsibility), Factor 4 (self-worth, self-esteem, self-concept) and secondary traumatic stress in the population under study. The results were observed in Tables 89 through 90.

$F(2, 43) = 6.216$, $p = .004$, $R = -.474$, $R^2 = .224$, adjusted $R^2 = .188$, observed power = .871.

Table 89

Coefficients: Multiple Regression for Factor 1 and Factor 4 (Secondary Traumatic Stress)

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	84.02	9.744		8.623	.000	64.367	103.667
	FACTOR1 t score	-.329	.134	-.329	-2.45	.018	-.600	-.058
	FACTOR4 t score	-.351	.134	-.351	-2.61	.012	-.622	-.080

Note. Dependent variable was secondary traumatic stress *t* score.

Table 90

Bootstrap for Coefficients: Factor 1 and Factor 4 (Secondary Traumatic Stress)

Model		Bootstrap				BCa 95% Confidence Interval	
		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	84.02	.822	9.95	.001	60.75	108.65
	FACTOR1 t score	-.329	.001	.137	.018	-.570	-.044
	FACTOR4 t score	-.351	-.016	.146	.023	-.631	-.137

Note. Bootstrap results are based on 1000 bootstrap samples.

In the model, 47.4% of the variance was explained. Self-Worth, self-esteem, and self-concept (Factor 4) explained 35.1% of the total variance and motivation/initiative and responsibility (Factor 1) explained 32.9% of the variance in the model of secondary traumatic stress. An additional model of the relationship between secondary traumatic

stress and the factors of exercise of self-care agency2 was also statistically significant, but with lower power. It was the relationship between Factor 2 and Factor 4: $F(2, 43) = 5.570$, $p = .007$, $R = -.454$, $R^2 = .206$, adjusted $R^2 = .169$, observed power = .830. Consequently, there was also a statistically significant negative, linear relationship between an active versus a passive response to situations; self-worth, self-esteem, and self-concept; and secondary traumatic stress in the population under study.

Simple linear regression and multiple regression analyses were used to predict secondary traumatic stress based on self-care agency. For the overarching research question about self-care agency's ability to predict secondary traumatic stress, the null hypothesis was rejected in favor of the alternate hypotheses for the exercise of self-care agency; the exercise of self-care agency 2; motivation/initiative and responsibility (Factor 1); an active versus a passive response to situations (Factor 2); and self-worth, self-esteem, self-concept (Factor 4) indicating that there were statistically significant linear relationship between these factors of Exercise of Self-Care Agency Scale and secondary traumatic stress.

Exercise of Self-Care Agency and Burnout

According to the ProQOL Manual (2010), burnout is related to the work environment. Stamm (2010) proposed that compassion can have negative effects on an individual. The effects of burnout may be characterized by one's feelings that their efforts make no difference (p. 28); and this individual may begin to see the workload as very high or the environment as non-supportive. Other characteristics may include unhappy feelings, or feeling disconnected; and individual may begin to display insensitivity.

Stamm proposed that these negative feelings tend to have a gradual onset. (p. 28), and this individual may begin to have difficulties in dealing with work or in doing his or her job effectively (p. 18).

When comparing the scores from this study to the scores reported in the ProQOL manual, the manual reported an alpha level of .75. It was also reported that a raw score of 22 or lower on the Burnout discrete scale indicates a low level of burnout. For the forty-six licensed professional social workers who participated in Part one this study, the alpha level was .759, the mean score 20.28 and the standard deviation was 4.45. Reliability analyses can be seen in Tables 91 through 94. When treated as one unit, burnout was low in this study group.

Reliability Index of Burnout

Table 91

Reliability Statistics for Burnout

Cronbach's Alpha	N of Items
.759	10

Table 92

Item Statistics for Burnout

	Mean	Std. Deviation	N
I am happy.	2.02	.683	46
I feel connected to others.	1.83	.739	46
I am not as productive at work because I am losing sleep over traumatic experiences of a person I help.	1.74	.743	46
I feel trapped by my job as a helper.	1.83	.877	46
I have beliefs that sustain me.	1.48	.623	46
I am the person I always wanted to be.	2.33	.762	46
I feel worn out because of my work as a helper.	3.13	.980	46
I feel overwhelmed because my case work load seems endless.	2.91	.962	46
As a result of my helping, I have intrusive, frightening thoughts.	1.57	.834	46
I am a very caring person.	1.46	.622	46

Note: Items are from the Professional Quality of Life's burnout scale (Stamm, 2009).

Table 93

Item-Total Statistics for Burnout

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I am happy.	18.26	17.175	.383	.745
I feel connected to others.	18.46	17.098	.354	.748
I am not as productive at work because I am losing sleep over traumatic experiences of a person I help.	18.54	15.809	.583	.718
I feel trapped by my job as a helper.	18.46	15.720	.477	.731
I have beliefs that sustain me.	18.80	18.205	.228	.761
I am the person I always wanted to be.	17.96	16.798	.389	.744
I feel worn out because of my work as a helper.	17.15	14.443	.591	.711
I feel overwhelmed because my case work load seems endless.	17.37	14.549	.590	.712
As a result of my helping, I have intrusive, frightening thoughts.	18.72	16.785	.340	.751
I am a very caring person.	18.83	18.147	.240	.760

Note: Items are from the Professional Quality of Life's burnout scale (Stamm, 2009).

Table 94

Scale Statistics for Burnout

Mean	Variance	Std. Deviation	N of Items
20.28	19.807	4.451	10

Descriptive Statistics of Burnout

Because the ProQOL Scale is composed three discrete scales- compassion satisfaction, secondary traumatic stress, and burnout- data was also provided for all the three factors. The first hypothesis was also applied to this data from the ProQOL Scale centering on burnout. The results of burnout are discussed based on research question one.

Exercise of Self-Care Agency and Burnout (H_a1_{13})

RQ1-Quantative: Is there a statistically significant linear relationship between the exercise of self-care agency and burnout?

- $H_a1_{13:}$ There was a statistically significant negative, linear relationship between the exercise of self-care agency and burnout in the population under study.

  $F(1, 44) = 19.089$, $p < .001$, $R = -.550$, $R^2 = .303$, adjusted $R^2 = .287$, observed power = .990.

- The null hypothesis was rejected in favor of the alternate hypothesis. The results can be observed in Tables 95 through 96. The bootstrapped results can be observed in Table 109.

Table 95

Coefficients of Burnout and Exercise of Self-Care Agency

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	77.503	6.417		12.08	.000	64.57	90.44
	ESCA *t* score	-.550	.126	-.550	-4.37	.000	-.804	-.296

Note. Dependent variable was burnout *t* score.

Table 96

Bootstrap for Coefficients of Burnout and Exercise of Self-Care Agency

Model		Bootstrap				BCa 95% Confidence Interval	
		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	77.50	.058	7.29	.000	63.566	91.582
	ESCA *t* score	-.550	.000	.141	.001	-.820	-.270

Note. Bootstrap results are based on 5000 bootstrap samples.

Exercise of Self-Care Agency 2 and Burnout (H$_a$1$_{14}$)

Based on the significance of the relationship between the exercise of self-care

agency and burnout, further analyses of these variables were conducted using factor

analysis to determine which components of the variable self-care agency contributed to

the significance of its relationship to burnout. The first research question was then

rephrased to include the revised scale to be called the Exercise of Self Care Agency 2.

RQ1-Quantative: Is there a statistically significant linear relationship between the

Exercise of Self Care Agency 2 (revised for this study) and burnout? It was found that:

- $H_a1_{14:}$ There was a statistically significant negative, linear relationship between

  the Exercise of Self Care Agency 2 and burnout in the population under study.

    $F(1, 44) = 17.179, p < .001, R = -.530, R^2 = .281$, adjusted $R^2 = .264$, observed

  power = .982.

- The null hypothesis was rejected in favor of the alternate hypothesis. The results

  can be observed in Tables 97 through 98.

Table 97

Coefficients for Burnout and Exercise of Self-Care Agency 2

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	76.495	6.516		11.74	.000	63.37	89.63
	ESCA2 t score	-.530	.128	-.530	- 4.15	.000	-.788	-.272

Note. Dependent variable was burnout *t* score.

Table 98

Bootstrap for Coefficients of Burnout and Exercise of Self-Care Agency 2

			Bootstrap			BCa 95% Confidence Interval	
Model		*B*	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	76.495	.029	6.597	.001	64.03	89.96
	ESCA2 t score	-.530	.001	.130	.001	-.793	-.277

Note. Bootstrap results are based on 1000 bootstrap samples

The research next focused on determining which factors of the Exercise of Self Care Agency 2 Scale predicted burnout.

Motivation/Initiative and Responsibility (Factor 1) and Burnout (H_a1_{15})

- H_a1_{15}: There was a statistically significant negative, linear relationship between motivation/initiative and responsibility (Factor 1) and burnout in the population under study. The results showed:

  $F(1, 44) = 13.978$, $p = .001$, $R = -.491$, $R^2 = .241$, adjusted $R^2 = .224$, observed power = .955.

- The null hypothesis has been rejected in favor of the alternate hypothesis. The results were observed in Tables 99 through 100.

Table 99

Coefficients of Burnout and Factor 1

Model		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
1	(Constant)	74.55	6.69		11.14	.000	61.06	88.04
	FACTOR1 *t* score	-.491	.131	-.491	-3.74	.001	-.756	-.226

Note. Dependent variable was burnout *t* score.

Table 100

Bootstrap for Coefficients for Burnout and Factor 1

Model		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
		Bootstrap				BCa 95% Confidence Interval	
1	(Constant)	74.55	.128	6.35	.001	62.95	87.57
	FACTOR1 *t* score	-.491	-.001	.127	.002	-.763	-.248

Note. Bootstrap results are based on 1000 bootstrap samples.

An Active Versus a Passive Response to Situations (Factor 2) and Burnout (H_a1_{16})

- H_a1_{16}: There was a statistically significant negative, linear relationship between

  the an active versus a passive response to situations (Factor 2) and burnout in the

  population under study. The results showed:

  $F(1, 44) = 14.126$, $p < .001$, $R = -.493$, $R^2 = .243$, adjusted $R^2 = .226$, observed

  power = .957.

- The null hypothesis was rejected in favor of the alternate hypothesis. The results

  were observed in Tables 101 through 102.

Table 101

Coefficients for Burnout and Factor 2

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	74.65	6.69		11.166	.000	61.176	88.122
	FACTOR2 t score	-.493	.131	-.493	-3.759	.000	-.757	-.229

Note. Dependent variable was burnout t score.

Table 102

Bootstrap for Coefficient for Burnout and Factor 2

Model			Bootstrap					
		B	Bias	Std. Error	Sig. (2-tailed)	BCa 95% Confidence Interval	
						Lower	Upper
1	(Constant)	74.65	-.211	6.914	.001	60.306	87.249
	FACTOR2 t score	-.493	.005	.134	.002	-.741	-.201

Note. Bootstrap results are based on 1000 bootstrap samples.

Knowledge and Information Seeking (Factor 3) and Burnout (H_01_{17})

- H_01_{17}: There was not a statistically significant relationship between knowledge

  and information seeking (Factor 3) and burnout in the population under study.

  $F(1, 44) = 2.695$, $p = .108$.

- The results showed that for this hypothesis, the null hypothesis was accepted. The

  results were observed in Tables 103 through 104.

Table 103

Coefficients: Burnout and Factor 3

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	*t*	Sig.	Lower Bound	Upper Bound
1	(Constant)	62.013	7.459		8.314	.000	46.981	77.045
	FACTOR3 *t* score	-.240	.146	-.240	-1.64	.108	-.535	.055

Note. Dependent variable was burnout *t* score.

Table 104

Bootstrap for Coefficients for Burnout and Factor 3

Model		Bootstrap				BCa 95% Confidence Interval	
	B	Bias	Std. Error	Sig. (2-tailed)		Lower	Upper
(Constant)	62.013	.625	8.815	.001		45.025	85.265
FACTOR3 *t* score	-.240	-.011	.174	.145		-.548	.047

Note. Bootstrap results are based on 1000 bootstrap samples.

Self-Worth, Self-Esteem, Self-Concept (Factor 4) and Burnout (H_01_{18})

- H_01_{18}: There is not a statistically significant linear relationship between self-worth, self-esteem, self-concept (Factor 4) and burnout in the population under study.

  $F(1, 44) = 2.838, p = .099, R = .246, R^2 = .061$, adjusted $R^2 = .039$, observed

power = .378.

- The null hypothesis was accepted. The results were observed in Tables 105 through 106. The model summary can be reviewed in Table 107.

Table 105

Coefficients: Burnout and Factor 4

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	*t*	Sig.	Lower Bound	Upper Bound
1	(Constant)	62.309	7.447		8.37	.000	47.299	77.318
	FACTOR4 *t* score	-.246	.146	-.246	-1.69	.099	-.541	.048

Note. Dependent variable was burnout *t* score.

Table 106

Bootstrap for Coefficients: Burnout and Factor 4

Model			Bootstrap			BCa 95% Confidence Interval	
		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	62.31	.517	6.448	.001	51.517	77.677
	FACTOR4 *t* score	-.246	-.009	.131	.057	-.528	-.032

Note. Bootstrap results are based on 1000 bootstrap samples.

Multiple Regression of Self-Care Agency and Burnout

A multiple regression analysis showed that no two factors combined to form

significance based on the individual variables that were significant.

Model Summary of the Factors of Self-Care Agency and Burnout

Table 107

Model Summary of Linear Regression for Burnout

Variable	R	R Square	Adjust. R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change	Power
ESCA	**-.550**	**.303**	**.287**	**8.45**	**.303**	**19.09**	**1**	**44**	**.001**	**.990**
ESCA2	**-.530**	**.281**	**.264**	**8.58**	**.281**	**17.18**	**1**	**44**	**.001**	**.982**
Factors										
Factor 1	**-.491**	**.241**	**.224**	**8.81**	**.241**	**13.98**	**1**	**44**	**.001**	**.955**
Factor 2	**-.493**	**.243**	**.226**	**9.47**	**.243**	**14.13**	**1**	**44**	**.001**	**.957**
Factor 3	-.240	.058	.036	9.82	.058	2.70	1	44	.108	.362
Factor 4	-.246	.061	.039	9.52	.061	2.84	1	44	.099	.378

Note. Dependent variable was burnout.

Simple linear regression and multiple regression analyses were also used to predict burnout based on self-care agency. For the overarching research question about self-care agency's ability to predict burnout, the null hypothesis was rejected in favor of the alternate hypotheses for the exercise of self-care agency; the exercise of self-care agency 2; motivation/initiative and responsibility (Factor 1); and an active versus a passive response to situations (Factor 2); indicating that there were statistically significant linear relationship between these factors of exercise of self-care agency and burnout.

Results

Compassion Satisfaction

This study focused on 46 licensed professional social workers who assisted in determining if there was a relationship between self-care agency and compassion satisfaction. In this two-part study that used a pretest-posttest/control-group design, Part 1 answered RQ1-Quantative: Is there a statistically significant linear relationship between the exercise of self-care agency 2 and compassion satisfaction?

According to the ProQOL Manual (2010), compassion satisfaction is related to satisfaction in the work environment. It further suggested that an individual displaying compassion satisfaction tends to gains pleasure from being able to do the job well (p. 12) and being an effective caregiver (p. 17). The person displaying compassion satisfaction also tends to derive pleasure from helping others through their job. They have positive feelings about their colleagues and contribute to the work setting (p. 12), where the positive aspects of compassion satisfaction may be viewed by some as altruistic or a feeling good that they can do something to help (p. 8).

When comparing the scores from the present study to the scores reported in the ProQOL manual, the manual reports an alpha level of .88. It was also reported that a raw score of 42 or higher on the Compassion Satisfaction discrete scale tends to indicate a high level of compassion satisfaction. For the 46 licensed professional social workers who participated in Part 1 this study, the mean score 42.02 with a standard deviation of 5.09. When treated as one unit, they displayed a high score in compassion satisfaction.

The manual reported an alpha level of .81 for compassion satisfaction. The alpha level for compassion satisfaction in this study was .885.

The Exercise of Self-Care Agency

The scores from the original Exercise of Self-Care Agency Scale were compared to the scores in the present study. There were two groups in the original scale development: 79 nursing students and 153 psychology students. Both groups represent individuals connected to a helping profession. When comparing the scores of these two groups to this study's scores, the following was found. In the original study, 153 psychology students participated in the study. The mean of the scores was 120.04 with a standard deviation of 17.74 where the mean range was from 91 to 151. In the 79 nursing students' 1st testing, the mean was 122.72 and the standard deviation was 13.75 with mean scores ranging from 90 to 154. For this study of 46 licensed professional social workers, the mean was 126.76 and the standard deviation was 20.83 with mean scores ranging from 83 to 166. For the original Exercise of Self-Care Agency Scale the maximum score for the scale was 172 indicating a high level of self-care agency (Kearney & Fleischer, 1979).

When comparing the reliability between the psychology students and the nursing students in the original study to licensed social workers in the present study, both the original and current study used a Spearman-Brown split-half even/odd -numbered item method for a reliability check. The reliability index for the psychology students was .77 while the reliability index for the nursing students in the original study was .80, and the

professional social workers in the present study was the same, .80. Results can be

compared using Table 108 and Table 109.

Table 108

Descriptive Statistics: Comparing Scores for the Exercise of Self-Care Agency Scale

	N	Range Minimum	Range Maximum	Mean	Std. Deviation
Licensed professional social worker (current study)	46	83	166	126.76	20.83
Psychology students (original study)	153	91	151	120.04	17.74
Nursing students (original study, 1st testing)	79	90	154	122.72	13.75

Table 109

Reliability Between Groups of the Current Study and the Original Study

Groups	N	Split-Half Reliability
Licensed professional social worker (current study)	46	.80
Psychology students (original study)	153	.77
Nursing students (original study, 1st testing)	79	.80

Comparing the ProQOLs Other Discrete Scales

When comparing the ProQOLs discrete secondary traumatic stress and burnout scales from the ProQOL manual to the scores in this study, the following results were observed pertaining to this group of 46 licensed professional social workers in Part 1 of the study.

- When comparing the scores from this study to the scores reported in the ProQOL manual's secondary traumatic stress scale, the manual reported an alpha level of .81. The alpha level for secondary traumatic stress in this study was .799. It was also reported that a raw score of 22 or lower on the secondary traumatic stress discrete scale tends to indicate a low level of secondary traumatic stress. The mean score for secondary traumatic stress in this study was 21.41 with a standard

deviation of 5.26. When treated as one unit, secondary traumatic stress was low

for this group.

- When comparing the scores from this study to the scores reported in the ProQOL

  manual's burnout scale, the manual reported an alpha level of .75. It was also

  reported that a raw score of 22 or lower on the burnout discrete scale indicates a

  low level of burnout. For the forty-six licensed professional social workers who

  participated in Part 1 this study, the alpha level was .759, the mean score 20.28

  and the standard deviation was 4.45. When treated as one unit, burnout was low in

  this study group. Results can be seen in Tables 110 and 111.

Table 110

ProQOL Descriptive Statistics: Current Study

		N	Mean	Std. Deviation
Current Study				
	Compassion satisfaction	46	42.02	5.09
	Secondary traumatic stress	46	21.41	5.26
	Burnout	46	20.28	4.45

Table 111

ProQOL Descriptive Statistics: Comparing Reliability Scores with the Original Scale

		N	Reliability Index
ProQOL Manual	(Database)		
	Compassion satisfaction	1187	.88
	Secondary traumatic stress	1187	.81
	Burnout	1187	.75
Current Study	(Licensed professional social workers/Current study)		
	Compassion satisfaction	46	.885
	Secondary traumatic stress	46	.799
	Burnout	46	75.9

Linear and Multiple Regression Part 1

RQ1-Quantative: Is there a statistically significant linear relationship between the exercise of self-care agency and compassion satisfaction?

For this question, the null hypothesis was rejected in favor of the alternate hypotheses for the exercise of self-care agency, the exercise of self-care agency 2 (revised for this study), Factor 1, Factor 2, and Factor 4 indicating that there were statistically significant relationships between the exercise of self-care agency and the ProQOLs compassion satisfaction.

- H_a1_1: It was found that there was a statistically significant, positive, linear relationship between the original Exercise of Self-Care Agency Scale and compassion satisfaction. As exercise of self-care agency increased by one standard unit, compassion satisfaction also increased by 37.5% of a standard unit. And, after factoring the original scale into component parts, it was determined that the four emerging factors accounted for 74.96% of the variance in the revised

Exercise of Self-Care Agency Scale called the Exercise of Self-Care Agency 2
Scale in this study.

- H_a1_2: There was a statistically significant, positive, linear relationship between the
  exercise of self-care agency 2 and its dimensions and compassion satisfaction. As
  exercise of self-care agency 2 increased by one standard unit, compassion
  satisfaction also increased by 41.4% of a standard unit. The factor analysis
  conducted on the original scale allowed the following hypotheses about self-care
  agency to be answered:

- H_a1_3: There was statistically significant, positive linear relationship between
  motivation/initiative and responsibility (Factor 1) and compassion satisfaction,
  and the relationship was moderate in strength. As motivation/initiative and
  responsibility increased by one standard unit, compassion satisfaction increased
  by 33.9% of a standard unit.

- H_a1_4: There was a statistically significant, positive, linear relationship between an
  active versus a passive response to situations (Factor 2) and compassion
  satisfaction in the population under study, and the relationship was also moderate
  in strength. As an active versus a passive response to situation increased by one
  standard unit, compassion satisfaction also increased by 38.2% of a standard unit.

- H_01_5: There was not a statistically significant relationship between the knowledge
  and information seeking (Factor 3) and compassion satisfaction in the population
  under study in Part one this study. Factor 3 did not reach the level of significance
  in this linear regression analysis.

- H_a1_6: There was a statistically significant, positive, linear relationship between self-worth/self-esteem/self-concept (Factor 4) and compassion satisfaction in the population under study, and the relationship was moderate in strength. As self-worth/self-esteem/self-concept increased by one standard unit, compassion satisfaction also increased by 29.9% of a standard unit.

A multiple regression analysis showed that there was a statistically significant, positive, linear relationship between the motivation /initiative and responsibility (Factor1), self-worth, self-esteem, self-concept (Factor 4) and compassion satisfaction in the population under study. It was shown that 45.7% of the variance in compassion satisfaction could be explained by the model. As these two factors increased by one standard unit, compassion satisfaction increased by 45.7% of a standard unit. The beta weights suggested that self-worth, self-esteem, and self-concept contributed 30.7 % of the unique variance to the model and motivation/initiative and responsibility contributed (34.8 %) of the unique variance. The observed power of the model was 83.7%.

Other Findings Related to the ProQOL Scale

By including the other two discrete variables secondary traumatic stress and burnout into the analyses, this study also appeared to support the contention that in order to holistically understand compassion in professionals like the social worker one must also look at the interaction of both compassion satisfaction and compassion fatigue (Stamm, 2002); and (c) that it is not possible to understand the negative aspects of compassion fatigue without knowledge about the positive in terms of compassion satisfaction and positive affect.

In this group of 46 licensed professional social worker participants in Part 1 of the study, using the raw scores, compassion satisfaction was high ($M = 42.02$, $SD = 5.09$), and secondary traumatic stress ($M = 21.41$, $SD = 5.26$) and burnout ($M = 20.28$, $SD = 4.45$) were low when compared the manual's scoring key (Stamm, 2010).

Secondary Traumatic Stress Analysis

The following hypotheses were also answered about the exercise of self-care agency and secondary traumatic stress:

- H_a1_7: There was a statistically significant, negative, linear relationship between the original Exercise of Self-Care Agency Scale and secondary traumatic stress. As the exercise of self-care agency increased by one standard unit, secondary traumatic stress decreased by 33.4% of a standard unit.

- H_a1_8: There was a statistically significant, negative, linear relationship between the exercise of self-care agency 2 and its dimensions and secondary traumatic stress. As the exercise of self-care agency 2 increased by one standard unit, secondary traumatic stress decreased by 35.3% of a standard unit. The following hypotheses about the factors of the exercise of self-care agency and secondary traumatic stress were answered:

- H_a1_9: There was a statistically, negative, linear significant relationship between Factor 1 and secondary traumatic stress in the population under study. It was found that there was statistically significant, negative, linear relationship between motivation/initiative and responsibility (Factor 1) and secondary traumatic stress, and the relationship was moderate in strength. As motivation/initiative and

responsibility increased by one standard unit, secondary traumatic stress decreased by 31.8% of a standard unit.

- H_a1_{10}: There was a statistically significant, negative, linear relationship between the Factor 2 and secondary traumatic stress in the population under study. The results showed that there was a statistically significant, negative, linear relationship between an active versus a passive response to situations (Factor 2) and secondary traumatic stress in the population under study, and the relationship was also moderate in strength. As an active versus a passive response to situations (Factor 2) increased by one standard unit, secondary traumatic stress decreased by 35.1% of a standard unit.

- H_01_{11}: There is not a statistically significant relationship between Factor 3 and secondary traumatic stress in the population under study. There was not a statistically significant relationship between knowledge and information seeking (Factor 3) and secondary traumatic stress in the population under study. Factor 3 did not reach the level of significance in this linear regression analysis.

- H_a1_{12}: There was a statistically significant, negative, linear relationship between Factor 4 and secondary traumatic stress in the population under study. There was a statistically significant, negative, linear relationship between self-worth/self-esteem/self-concept (Factor 4) and secondary traumatic stress in the population under study, and the relationship was moderate in strength. As self-worth/self-esteem/self-concept increased by one standard unit, secondary traumatic stress decreased by 34% of a standard unit.

A multiple regression analysis showed that there was a statistically significant, negative, linear relationship between the motivation /initiative and responsibility (Factor1), self-worth, self-esteem, self-concept (Factor 4) and secondary traumatic stress in the population under study. It was shown that 47.4% of the variance in secondary traumatic stress could be explained by the model. As these two factors increased by one standard unit, secondary traumatic stress decreased by 47.4% of a standard unit. The beta weights suggested that self-worth, self-esteem, and self-concept contributed 35.1 % of the unique variance to the model and motivation/initiative and responsibility contributed (32.9 %) of the unique variance. The observed power of the model was 87.1%.

Burnout Analysis

The following hypotheses were also answered about self the exercise of self-care agency and burnout:

- H_a1_{13}: There was a statistically significant, negative, linear relationship between the exercise of self-care agency and burnout. The null hypothesis was rejected in favor of the alternate hypothesis. Results showed that as the exercise of self-care agency increased by one standard unit, burnout decreased by 55% of a standard unit.

- H_a1_{14}: There was also a statistically significant, negative, linear relationship between the exercise of self-care agency 2 (revised for this study) and burnout. It was found that there was a statistically significant, negative, linear relationship between the revised version of the exercise of self-care agency and its dimensions

and burnout. As the exercise of self-care agency 2 increased by one standard unit, burnout decreased by 53 % of a standard unit.

- H_a1_{15}: There was a statistically significant, negative, relationship between Factor 1 and burnout in the population under study. It was found that there was statistically significant, negative, linear relationship between motivation/initiative and responsibility (Factor 1) and burnout, and the relationship was moderate in strength. As motivation/ initiative and responsibility increased by one standard unit, burnout decreased by 49.1 % of a standard unit.

- H_a1_{16}: There was a statistically significant between the Factor 2 and burnout in the population under study. The results showed that there was a statistically significant negative, linear relationship between an active versus a passive response to situations (Factor 2) and burnout in the population under study; and the relationship was also moderate in strength. As an active versus a passive response to situations increased by one standard unit, burnout decreased by 49.3 % of a standard unit.

- H_01_{17}: There is not a statistically significant relationship between Factor 3 and burnout in the population under study. There was not a statistically significant relationship between knowledge and information seeking (Factor 3) and burnout in the population under study in Part 1this study. Factor 3 did not reach the level of significance in a linear regression analysis.

- H_01_{18}: There was not a statistically significant between Factor 4 and burnout in the population under study. There was not a statistically significant, negative

relationship between self-worth/self-esteem/self-concept (Factor 4) and burnout in the population under study. Factor 4 did not reach the level of significance in a linear regression analysis. Tables 112 through 114 summarize the findings of the regression analyses in Part 1 of the study.

Table 112

Model Summary of Linear Regression for Compassion Satisfaction

Variable	R	R Square	Adjust. R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Observed Power
					Change Statistics					
ESCA	.375	.141	.121	9.37363	.141	7.215	1	44	.010	.748
ESCA2	**.414**	**.172**	**.153**	**9.20470**	**.172**	**9.112**	**1**	**44**	**.004**	**.839**
Factors										
Factor 1	.339	.115	.094	9.51580	.115	5.696	1	44	.021	.646
Factor 2	.382	.146	.126	9.34626	.146	7.515	1	44	.009	.765
Factor 3	.156	.024	.002	9.98856	.024	1.103	1	44	.229	.177
Factor 4	.296	.087	.067	9.66096	.087	4.214	1	44	.046	.519

Dependent variable was compassion satisfaction.

Table 113

Model Summary of Linear Regression of Secondary Traumatic Stress

Variable	R	R Square	Adjust R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Observed Power
					Change Statistics					
ESCA	-.334	.112	.091	9.53213	.112	5.526	1	44	.023	.633
ESCA2	-.353	.124	.105	9.46272	.124	6.255	1	44	.016	.687
Factors										
Factor 1	-.318	.101	.081	9.58721	.101	4.958	1	44	.031	.586
Factor 2	-.351	.123	.103	9.46884	.123	6.190	1	44	.017	.682
Factor 3	-.040	.002	-.021	10.105	.002	.071	1	44	.790	.058
Factor 4	-.340	.116	.096	9.50912	.116	5.766	1	44	.021	.651

Dependent variable was secondary traumatic stress.

Table 114

Model Summary of Linear Regression for Burnout

Variable	R	R Square	Adjust. R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Observed Power
					Change Statistics					
ESCA	**-.550**	**.303**	**.287**	**8.44561**	**.303**	**19.089**	**1**	**44**	**.000**	**.990**
ESCA2	**-.530**	**.281**	**.264**	**8.57637**	**.281**	**17.179**	**1**	**44**	**.000**	**.982**
Factors										
Factor 1	**-.491**	**.241**	**.224**	**8.81000**	**.241**	**13.978**	**1**	**44**	**.001**	**.955**
Factor 2	**-.493**	**.243**	**.226**	**9.46884**	**.243**	**14.126**	**1**	**44**	**.000**	**.957**
Factor 3	-.240	.058	.036	9.81678	.058	2.695	1	44	.108	.362
Factor 4	-.246	.061	.039	9.50912	.061	2.838	1	44	.099	.378

Dependent variable was burnout.

Figures 8 through 11summarize the items that comprised each of the factors of the exercise of self-care agency 2 that were significant for compassion satisfaction, secondary traumatic stress, and burnout. As observed in the tables, the results of the analyses showed that there was a statistically significant linear relationship with the original Exercise of Self-Care Agency Scale and the Exercise of Self-Care Agency 2 Scale (factored for this study). Motivation/ initiative and responsibility (Factors 1), an active versus a passive response to situations (Factor 2), and self-worth, self-esteem, self-concept (Factor 4) showed a statically significantly, positive linear relationships with compassion satisfaction.

- Motivation/ initiative and responsibility (Factors 1), an active versus a passive response to situations (Factor 2), and self-worth, self-esteem, self-concept (Factor

4) showed a statically significantly, negative linear relationships with secondary traumatic stress.

- Motivation/ initiative and responsibility (Factors 1), an active versus a passive response to situations (Factor 2), showed a statically significantly, negative linear relationships with burnout.

Factored From the Exercise of Self-Care Agency
(Kearney & Fleischey, 1979)

Factor 1

Factor 2

Factor 4

Motivation/ Initiative and Responsibility

Active versus a Passive Response to Situations

Self-Worth, Self-Esteem, Self-Confidence

Acknowledging that the job that they perform merits them taking the time and care they need to maintain their own health related to their work environment.

Being a good friend to themselves, also.

An aim for reaching high levels of wellbeing on the job.

Taking pride in doing designated things that are recommended to support health in the work environment.

Looking at the joys of life .

(Kearney & Fleischey, 1979)

Taking responsibility for self by not putting off doing things known to be good for them in the work environment.

Being aware that they may sometimes feel the lack of energy to care for their health need in a personal way, but to push forward to carry out resolution made concerning their health- things like eating a balanced diet, having a planned program for rest and exercise, and taking good care of themselves in general. (Kearney & Fleischey, 1979)

Health priorities and self-esteem suggesting that contributing to their family environment and to others could enhance their self-esteem, self-confidence, and the feeling of self-worth.

(Kearney & Fleischey, 1979)

Had a Significant Positive Linear Relationship with Compassion Satisfaction

Had a Significant Positive Linear Relationship with Compassion Satisfaction

Had a Significant Positive Linear Relationship with Compassion Satisfaction

Compassion Satisfaction

Getting satisfaction, feeling pleasure,

pride and invigoration from being able to help people.

Being happy and satisfied in the chosen field of social work believing that they can make a difference as a successful helper.

(Stamm, 2009).

Figure 8. Self-Care agency and compassion satisfaction (Kearney & Fleischer, 1979; Stamm, 2009). *Note:* As Factor 1, 2 and 4 increased, compassion satisfaction also increased.

Factored From the
Exercise of Self-Care
Agency
(Kearney &
Fleischey, 1979)

Factor 1

Factor 2

Factor 4

Motivation/
Initiative and
Responsibility

Active versus a
Passive
Response to
Situations

Self-Worth,
Self-Esteem,
Self-
Confidence

Acknowledging that the job that
they perform merits them taking
the time and care they need to
maintain their own health related
to their work environment.

Being a good friend to
themselves, also.

An aim for reaching high levels
of wellbeing on the job.

Taking pride in doing designated
things that are recommended to
support health in the work
environment.

Looking at the joys of life .

(Kearney & Fleischey, 1979)

Taking responsibility for self
by not putting off doing things
known to be good for them in
the work environment.

Being aware that they may
sometimes feel the lack of
energy to care for their health
need in a personal way, but to
push forward to carry out
resolution made concerning
their health- things like eating a
balanced diet, having a planned
program for rest and exercise,
and taking good care of
themselves in general.
(Kearney & Fleischey, 1979)

Health priorities and
self-esteem suggesting
that contributing to
their family
environment and to
others could enhance
their self-esteem, self-
confidence, and the
feeling of self-worth.

(Kearney & Fleischey,
1979)

Had a Significant
Negative Linear
Relationship with
Secondary Traumatic
Stress

Had aSignificant
Negative Linear
Relationship
with Secondary
Traumatic
Stress

Had aSignificant
Negative Linear
Relationship
with Secondary
Traumatic Stress

Secondary Traumatic Stress

Being preoccupied with more than one person they helped.

Difficulty separating personal life from that of being a helper.

Avoiding certain activities or situations because they remind the
professional social worker of the frightening experiences of those they
help.

Jumping or being startled by unexpected sounds.

Having frightening, intrusive thoughts.

Being depressed, or feeling on edge, or as if they are experiencing the
trauma of the people helped;.

Not being able to recall important parts of their work with trauma
victims. (Stamm, 2009)

Figure 9. Self-Care agency and secondary traumatic stress (Kearney & Fleischer, 1979;
Stamm, 2009). *Note:* As Factor 1, 2 and 4 increased, secondary traumatic stress
decreased.
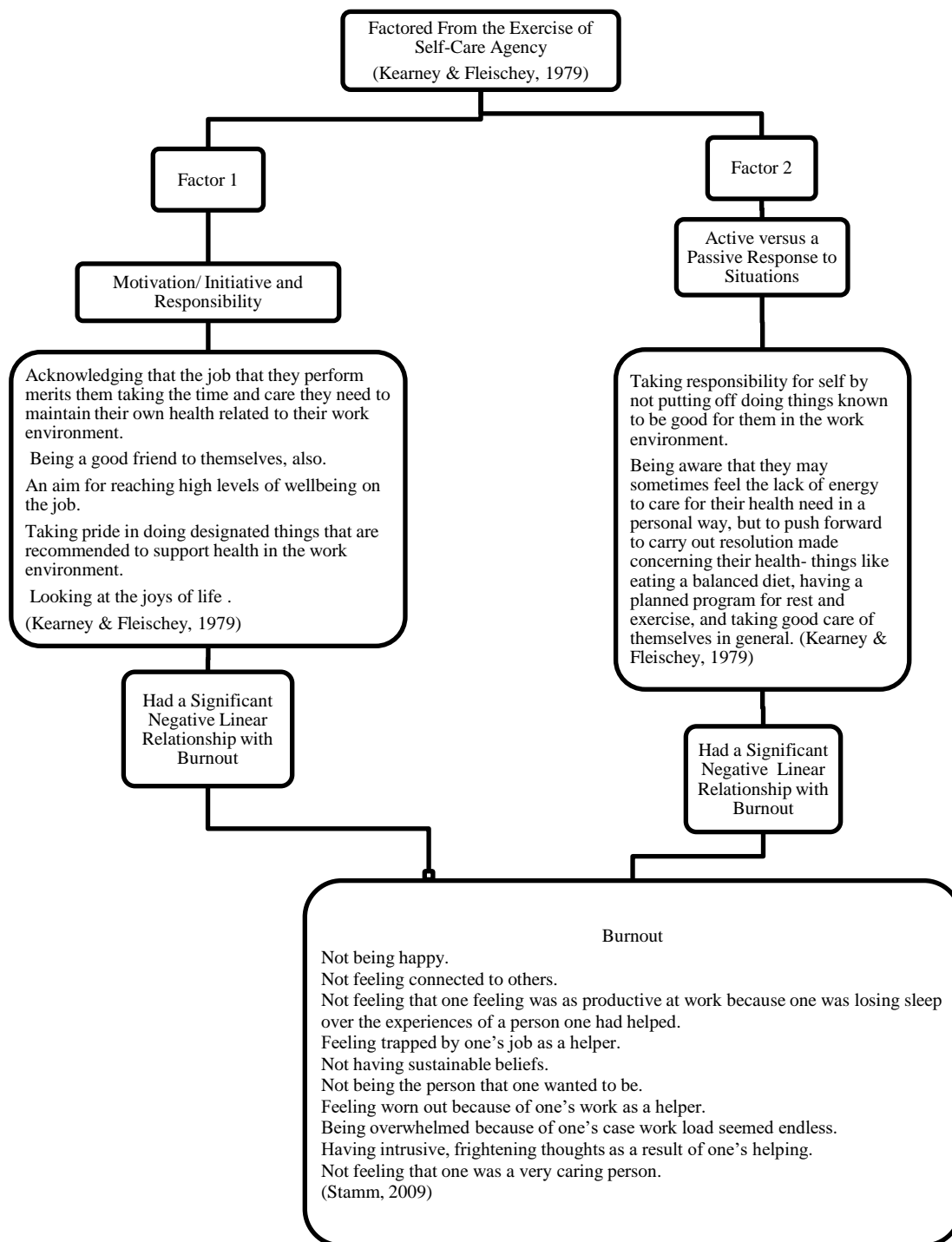
Figure 10. The exercise of self-care agency and the burnout (Kearney & Fleischer, 1979; Stamm, 2009). Note: As Factor 1 and 2 increased, burnout decreased.
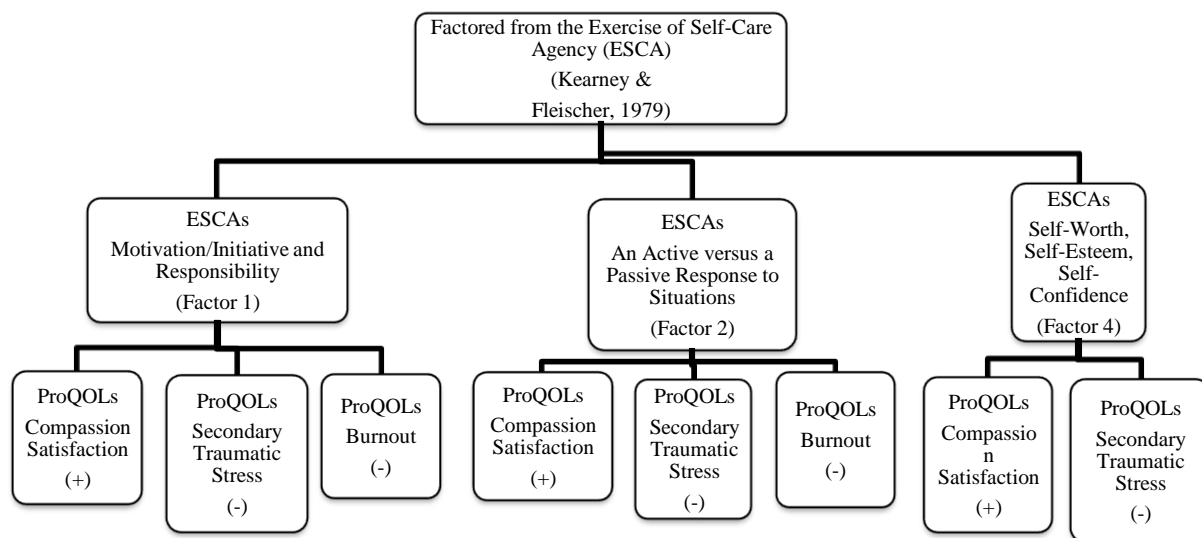
Figure 11. The relationship between the Exercise of Self-Care Agency 2 Scale and the ProQOL Scale (Kearney & Fleischer, 1979; Stamm, 2009).

Examining the Analyses and Correcting for Familywise Error Rate

With the Exercise of Self-Care Agency Scale, it was proposed that each of the four factors or composite parts contributed to the overall variable. During exploratory factor analysis, it was determined that in the overall Exercise of Self-Care Agency variable, four factors combined to account for 74.66 percent of the variance in the new the exercise of self-care agency 2. I also determined a Familywise Error Rate of the exercise of self-care agency 2 as a composite total variable, which included:

- o Motivation/initiative and responsibility (Factor 1)

- o An active versus a passive response to situations (Factor 2)

- o Knowledge and information seeking (Factor 3)

- o Self-Worth, self-esteem, self-concept (Factor 4)

The inference of the scale was that each of the composite parts predicted a portion of the variance in the compassion satisfaction variable. One approach to the multiplicity of the Exercise of Self-Care Agency Scale was the look at the Familywise Error Rate (FWER) (Benjamini & Hochberg, 1994, p. 289) where I sought to describe the expected proportion of falsely rejected hypotheses, also called the false discovery rate (p. 289). Table 115 shows the results of the analyses where each predictor was treated as an individual variable using an alpha level of .05.

Table 115

Model Summary of Linear Regression for Compassion Satisfaction and the Exercise of Self-Care Agency

Variable	*R*	*R* Square	Adjust. *R* Square	Std. Error of the Estimate	Change Statistics *R* Square Change	*F* Change	df1	df2	Sig. *F* Change	Observed Power
ESCA	.375	.141	.121	9.37363	.141	7.215	1	44	.010	.748
ESCA2	**.414**	**.172**	**.153**	**9.20470**	**.172**	**9.112**	**1**	**44**	**.004**	**.839**
Factors										
Factor 1	**.339**	**.115**	**.094**	**9.51580**	**.115**	**5.696**	**1**	**44**	**.021**	**.646**
Factor 2	**.382**	**.146**	**.126**	**9.34626**	**.146**	**7.515**	**1**	**44**	**.009**	**.765**
Factor 3	.156	.024	.002	9.98856	.024	1.103	1	44	.229	.177
Factor 4	**.296**	**.087**	**.067**	**9.66096**	**.087**	**4.214**	**1**	**44**	**.046**	**.519**

Dependent variable was compassion satisfaction. *Note:* Factor1, Factor 2, and Factor 4 rejected the null hypothesis as individual tests. The Exercise of Self-Care Agency and the Exercise of Self-Care Agency 2 also rejected the null hypothesis as individual tests.

Table 116 shows the results of the analyses where the False Discovery Rate for the exercise of self-care agency and compassion satisfaction were analyzed using the Benjamini-Hochberg adjusted *p* value with alpha set at .05. Factor 1 and Factor 2 rejected the null hypothesis. Factor 4 failed to reject the null hypothesis at the .05 level FDR of significance.

Table 116

False Discovery Rate for the Exercise of Self-Care Agency *and Compassion Satisfaction with a P- Value of .05*

Variables	Rank of Factors	Original *P* Value	Critical Value	Q Value	Benjamini-Hochberg Adjusted *P* Value	**Significant Using an FDR of .05**
Factor 1	**Factor 2**	**.009**	**.0125**	**.05**	**.036**	**Yes**
Factor 2	**Factor 1**	**.021**	**.025**	**.05**	**.042**	**Yes**
Factor 3	Factor 4	.046	.0375	.05	.061	No
Factor 4	Factor 3	.229	.05	.05	.229	No

Dependent variable was compassion satisfaction. *Note:* The Benjamini-Hochberg adjusted *p* value for Factor1 and Factor 2 rejected the null hypothesis in the Familywise Error Rate (FWER) analysis. However, the Benjamini-Hochberg adjusted *p* value failed to reject the null at a .05 FDR significance level for Factor 4.

Table 117 shows the results of the analyses where the False Discovery Rate for the exercise of self-care agency and compassion satisfaction was analyzed using the -Hochberg adjusted *p* value with alpha set at .0127 using the formula: $\alpha = 1 - (1 - .05)^{1/4} = 0.0127$. In order to achieve a combined type 1 error rate, each alpha value in the table was set at 0.0127 for hypothesis testing. With the *p* values listed in ascending order, the *p* value in Factor 1 was not less than the critical value and thus the analysis failed to reject the null hypothesis at a FDR of .0127. No further Benjamini-Hochberg Familywise analysis at a *p* value of .0127 of the hypotheses was conducted.

Table 117

False Discovery Rate for Compassion Satisfaction and the Exercise of Self-Care Agency with a P- Value of .0127

Variables	Rank of Factors	Original *P* Value	Critical Value	Q Value	Benjamini-Hochberg Adjusted *P* Value	**Significant Using an FDR of .0127**
Factor 1	Factor 2	.009	0.003175	.0127	.036	No
Factor 2	Factor 1	.021	0.00635	.0127	.042	No
Factor 3	Factor 4	.046	0.009524	.0127	.061	No
Factor 4	Factor 3	.229	0.0127	.0127	.229	No

Dependent variable was compassion satisfaction. *Note:* With an FDR of .127 the analysis fails to reject the null hypothesis in the Familywise Error Rate (FWER) for any of the factors.

Comparing Familywise Error Rates (FWER) Analyses: Compassion Satisfaction

Next, the Benjamini and Hochberg Error Rate (FWER) method of analysis was

compared to the Holm-Bonferroni Familywise Error Rate (FWER) method.

Holm-Bonferroni, the Exercise of Self-Care Agency and Compassion Satisfaction

- **Step 1: *P*– values order from smallest to largest.**

    H_2 = .009

    H_1 = .021

    H_4 =.046

    H_3 =.229

- **Step 2: Holm-Bonferroni formula for the first rank.**

    Holm-Bonferroni = α / (n - rank + 1)

    Holm-Bonferroni = .05 / 4 -1 +1

    Holm-Bonferroni = .05/4 = .0125

- **Step 3: First-ranked (smallest) p – value from Step 1 compared to the alpha level calculated in Step 2.**

  Smallest p – value in Step 1 (H_2 = .009) < Alpha level in Step 2 (.0125).

  The p – value is smaller than the alpha level so the null hypothesis is rejected for this individual test.

- **Step 4: Holm-Bonferroni formula for the second rank.**

  Holm-Bonferroni = Target α / (n - rank + 1)

  Holm-Bonferroni = .05 / 4 – 2 + 1

  Holm-Bonferroni = .05 /3

  Holm-Bonferroni = .0167

- **Step 5: Results from the Holm-Bonferroni formula in Step 4 compared to the second-ranked p – value.**

  Second ranked p – value, in Step 1 (H_1 = .021) is not less than the Alpha level in Step 2 (.0167).

  The p value of .021 is greater than .0167, so the null hypothesis for H_2 is not rejected.

As observed in Table 118, although Holm-Bonferroni formula rejected null hypothesis, the Benjamini-Hochberg method failed to reject the null hypothesis with the adjustment to the p value the method of calculating make to the Familywise Error Rates in Factor 2.

Table 118

Familywise Error Rate (FWER) Comparison Chart

Method	Factor	*P* Value	Critical Value	Alpha Level	Benjamini-Hochberg Adjusted *P* Value	Familywise Error Rate (FWER)/FDR Comparison
Benjamini-Hochberg Method	**Factor 2**	**.009**	**0.003175**	**.0127**	**.036**	**No**
Holm-Bonferroni Formula	**Factor 2**	**.009**		**.0125**		**Yes**

The analyses for Part 1 of the study indicated that (a) the total 43 item Exercise of Self-Care Agency Scale was significant individual predictor of compassion satisfaction; (b) the reduced 16 item Exercise of Self-Care Agency 2 Scale was a significant individual predictor of compassion; (c) motivation/initiative and responsibility (Factor 1) was a significant individual predictor of compassion satisfaction; (d) an active versus a passive response to situations (Factor 2) was a significant individual predictor of compassion satisfaction; and (e) self-worth, self-esteem, self-concept was a significant individual predictor of compassion satisfaction. Although these predicators achieved a moderate effect size and a significance of .05 or less, none of these individual predictors achieved a .80 power level. However, only the exercise of self-care agency 2 achieved a moderate effect size, significance of .05 a power level above .80. The exercise of self-care agency 2 met the requirements of the analyses.

For this part of the study, the exercise of self-care agency 2

H_a1_2: There was a statistically significant linear relationship between the exercise of self-care agency 2 and compassion satisfaction in the population under study. The null hypothesis was rejected in favor of the alternate hypothesis: $F(1, 44) = 9.112$, $p = .004$, $R = .414$, $R^2 = .172$, adjusted $R^2 = .153$, observed power $= .839$. And, with the False Discovery Rate for the exercise of self-care agency, exercise of self-care agency 2 and compassion satisfaction, using the Benjamini-Hochberg adjusted p value with alpha set at .05, I was able to reject the null hypotheses in favor of the alternate hypothesis for both motivation/initiative and responsibility (Factor 1) and an active versus a passive response to situations (Factor 2). These were significant composite predictors of compassion satisfaction within the Exercise of Self-Care Agency 2 Scale. However, the FDR failed to reject the null hypothesis for self-worth, self-esteem, and self-concept (Factor 4) at the .05 level FDR of significance. As observed in the previous Table 117, the Benjamini-Hochberg Method of FDR failed to reject the null for all four Factors at the .0127 level of significance. However, the Holm-Bonferroni formula did find that an active versus a passive response to situations (Factor 2) would be able to reject the null at the .0125 level (without an adjustment for the p value as observed in the Benjamini-Hochberg method) as observed in Table 118.

The Exercise of Self-Care Agency 2 and Secondary Traumatic Stress

The first research question was:

RQ1-Quantative: Is there a statistically significant linear relationship between the exercise of self-care agency and secondary traumatic stress in the population under study? The hypotheses showed**:**

- H_a1_7: There was a statistically significant negative, linear relationship between the exercise of self-care agency and secondary traumatic stress in the population under study: $F(1, 44) = 5.525$, $p = .023$, $R = -.334$, $R^2 = .112$, adjusted $R^2 = .091$, observed power = .663. The null hypothesis was rejected in favor of the alternate hypothesis and the analysis was continued. The analysis rejected the null hypothesis.

Through exploratory factor analysis the Exercise of Self-Care Agency Scale was factored into four component parts (called the exercise of self-care agency 2 for the purposes of this study):

- Motivation/initiative and responsibility (Factor 1)

- An active versus a passive response to situations (Factor 2)

- Knowledge and information seeking (Factor 3)

- Self-Worth, self-esteem, self-concept (Factor 4)

The Components of the Exercise of Self-Care Agency 2 as Independent Predictors

For the new factored scale, the Exercise of Self-Care Agency 2, the research question was:

RQ1-Quantative: Is there a statistically significant linear relationship between the exercise of self-care agency 2 and secondary traumatic stress? The results showed:

- H_a1_8: There was a statistically significant negative, linear relationship between the exercise of self-care agency 2 and secondary traumatic stress in the population under study: $F(1, 44) = 6.225$, $p = .016$, $R = -.353$, $R^2 = .124$, adjusted $R^2 = .105$,

observed power = .687. The null hypothesis was rejected in favor of the alternate

hypothesis. The analysis was continued. The analysis rejected the null hypothesis.

Each component part of the Exercise of Self-Care Agency 2 Scale achieved an

adequate alpha level above .7 and was treated as an independent predictor for

analysis. In the Exercise of Self-Care Agency 2 composite Scale, there was one

research question and four hypotheses considered:

- Motivation/initiative and responsibility (Factor 1)

    H_a1_9: There was a statistically significant linear relationship between

    motivation/initiative and responsibility (Factor 1) and secondary traumatic

    stress in the population under study. The results showed: $F(1, 44) = 4.958$,

    $p = .031$, $R = -.318$, $R^2 = .101$, adjusted $R^2 = .081$, observed power = .586.

    The null hypothesis has been rejected in favor of the alternate hypothesis.

- An active versus a passive response to situations (Factor 2)

    H_a1_{10}: There was a statistically significant relationship between the an

    active versus a passive response to situations (Factor 2) and secondary

    traumatic stress in the population under study: The results showed: $F(1,$

    $44) = 6.190$, $p = .017$, $R = -.351$, $R^2 = .123$, adjusted $R^2 = .103$, observed

    power = .682. The null hypothesis has been rejected in favor of the

    alternate hypothesis.

- Knowledge and information seeking (Factor 3).

    H_01_{11}: There was not a statistically significant linear relationship between

    knowledge and information seeking (Factor 3) and secondary traumatic

stress. The results showed: $F(1, 44) = .071$, $p = .790$. The null hypothesis was accepted.

- Self-Worth, self-esteem, self-concept (Factor 4)

  - H_a1_{12}: There was a statistically significant linear relationship between self-worth, self-esteem, and self-concept (Factor 4) and secondary traumatic stress in the population under study: $F(1, 44) = 5.766$, $p = .021$, $R = -.340$, $R^2 = .116$, adjusted $R^2 = .096$, observed power $= .651$. The null hypothesis was rejected in favor of the alternate hypothesis.

The Exercise of Self-Care Agency 2 and Familywise Error Rate (FWER)

A Familywise Error Rate for the exercise of self-care agency 2 was analyzed on the variable secondary traumatic stress. The inference of the analysis was that each of the composite parts the Exercise of Self-Care Agency 2 Scale predicted a portion of the variance in the variable. One approach to the multiplicity of the secondary traumatic stress scale was the look at the Familywise Error Rate (FWER) (Benjamini & Hochberg, 1994, p. 289) where I sought to describe the expected proportion of falsely rejected hypotheses. Table 119 shows the results of the analyses and discovery rate where each predictor was treated as an individual variable using an alpha level of .05.

Table 119

Model Summary of Linear Regression of the Exercise of Self-Care Agency *and Secondary Traumatic Stress*

| | | | Adjust | Std. Error | Change Statistics | | | | | |
| | | R | R | of the | R Square | F | df | | Sig. F | Obsvd |
Variable	R	Square	Square	Estimate	Change	Change	1	df2	Change	Power
ESCA	**-.334**	**.112**	**.091**	**9.53213**	**.112**	**5.526**	**1**	**44**	**.023**	**.633**
ESCA2	**-.353**	**.124**	**.105**	**9.46272**	**.124**	**6.255**	**1**	**44**	**.016**	**.687**
Factors										
Factor 1	**-.318**	**.101**	**.081**	**9.58721**	**.101**	**4.958**	**1**	**44**	**.031**	**.586**
Factor 2	**-.351**	**.123**	**.103**	**9.46884**	**.123**	**6.190**	**1**	**44**	**.017**	**.682**
Factor 3	-.040	.002	-.021	10.105	.002	.071	1	44	.790	.058
Factor 4	**-.340**	**.116**	**.096**	**9.50912**	**.116**	**5.766**	**1**	**44**	**.021**	**.651**

Dependent variable was secondary traumatic stress. *Note:* Factor1, Factor 2, and Factor 4 rejected the null hypothesis as the individual tests. The Exercise of Self-Care Agency and the Exercise of Self-Care Agency 2 also rejected the null hypothesis as individual tests.

Table 120 shows the results of the analyses where the False Discovery Rate for the exercise of self-care agency and secondary traumatic stress was analyzed using the Benjamini-Hochberg adjusted *p* value with alpha set at .05. Factor 1 and Factor 4 rejected the null hypothesis at the .05 level of significance. However, Factor 2 failed to reject the null hypothesis at the .05 level of significance.

Table 120

False Discovery Rate for Secondary Traumatic Stress and the Exercise of Self-Care Agency *with a p value of .05*

Variables	Rank of Factors	Original *P* Value	Critical Value	Q Value	Benjamini-Hochberg Adjusted *P* Value	**Significant Using an FDR of .05**
Factor 1	Factor 2	.017	.0125	.05	.068	No
Factor 2	**Factor 4**	**.021**	**.025**	**.05**	**.042**	**Yes**
Factor 3	**Factor 1**	**.031**	**.0375**	**.05**	**.0413**	**Yes**
Factor 4	Factor 3	.79	.05	.05	.79	No

Dependent variable was secondary traumatic stress. *Note:* Factor1, Factor 4 rejected the null hypothesis in the Familywise Error Rate (FWER) at .05. However, Factor 2 failed to reject the null at a .05 significance level (FDR) as it did in the individual analysis of the components.

Table 121 shows the results of the analyses where the False Discovery Rates for the exercise of self-care agency and secondary traumatic stress were analyzed using the Benjamini-Hochberg adjusted *p* value with alpha set at .0127 using the formula: $\alpha = 1 - (1 - .05)^{1/4} = 0.0127$. In order to achieve a combined type 1 error rate, each alpha value in the table was set at 0.0127 for hypothesis testing. With the *p* values listed in ascending order, the adjusted *p* value in Factor 1 nor any of the other three factors *p* values (Factor 2, Factor 3, or Factor 4), were not less than the critical value. Thus, the analysis failed to reject the four null hypotheses at a FDR of .0127.

Table 121

False Discovery Rate for Secondary Traumatic Stress and the Exercise of Self-Care Agency with a p value of .0125

Variables	Rank of Factors	Original P Value	Critical Value	Q Value	Benjamini-Hochberg Adjusted *P* Value	**Significant Using an FDR of .0127**
Factor 1	Factor 2	.017	.003175	.0127	.068	No
Factor 2	Factor 4	.021	.00635	.0127	.042	No
Factor 3	Factor 1	.031	.009524	.0127	.0413	No
Factor 4	Factor 3	.79	.0127	.0127	.79	No

Dependent variable was secondary traumatic stress. *Note:* With an FDR of .127 the analysis fails to reject the null hypothesis for all four factors of the Exercise of Self-Care Agency Scale.

Next, the Benjamini and Hochberg Error Rate (FWER) method of analysis was compared to the Holm-Bonferroni Familywise Error Rate (FWER) method with the results shown in Table 122.

Holm-Bonferroni: The Exercise of Self-Care Agency and Secondary Traumatic Stress.

- **Step 1: *p* values ordered from smallest to largest.**

  $H_2 = .017$

  $H_4 = .021$

  $H_1 = .031$

  $H_3 = .79$

- **Step 2: Holm-Bonferroni formula for the first rank.**

  Holm-Bonferroni $= \alpha / (n - \text{rank} + 1)$

  Holm-Bonferroni $= .05 / 4 - 1 + 1$

Holm-Bonferroni = .05/4 = .0125

- **Step 3: First-ranked (smallest) _p_ value from Step 1 compared to the alpha**

  level calculated in Step 2.

  Smallest _p_ value in Step 1 (H_2 = .017) is not less than the Alpha level in Step 2

  (.0125).

  The _p_ value of .017 is greater than .0125, so the null hypothesis for H_2 is not

  rejected.

Table 122

Familywise Error Rate (FWER) Comparison Chart

Method	Factor	*Original* *P* Value	Critical Value	Alpha Level	Benjamini-Hochberg Adjusted *P* Value	FDR Comparison
Benjamini-Hochberg Method	Factor 4	.017	**0.003175**	.0127	.068	**No**
Holm-Bonferroni formula	Factor 4	.017		.0125		**No**

Familywise Error Rate (FWER) Compared to Individual Linear Regression

The analyses for Part 1 of the study indicated that (a) the total 43 item Exercise of

Self-Care Agency Scale was a significant individual predictor of secondary traumatic

stress; (b) the reduced-16 item Exercise of Self-Care Agency 2 Scale was a significant

individual predictor of secondary traumatic stress; (a) an active versus a passive response

to situations (Factor 2) was a significant individual predictor of secondary traumatic

stress; (b) self-worth, self-esteem, self-concept (Factor 4) was a significant individual predictor of secondary traumatic stress; and (c) motivation/initiative and responsibility (Factor 1) was a significant individual predictor of secondary traumatic stress. Although each individual predictor achieved a moderate effect size and a significance of .05 or less, none of the individual Factors (Factor 1, Factor 2, Factor 3, or Factor 4) achieved at least a .80 power level.

Using the Benjamini-Hochberg adjusted p value with alpha set at .05, I was able to reject the null hypotheses for self-worth, self-esteem, self-concept (Factor 4) and motivation/initiative and responsibility (Factor 1). These were significant composite predictors of secondary traumatic stress within the composite Exercise of Self-Care Agency 2 Scale. However the Benjamini-Hochberg Method of FDR failed to reject the null for all four Factors at the .0127 level of significance. The Holm-Bonferroni formula FDR also failed to reject the null for all four component of the Exercise of Self-Care Agency 2 Scale.

The Exercise of Self-Care Agency 1 and Burnout (H_a1_{13})

RQ1: Is there a statistically significant linear relationship between the exercise of self-care agency and burnout in the population under study?

- $H_a1_{13:}$ There was a statistically significant negative, linear relationship between the exercise of self-care agency and burnout in the population under study.

    $F(1, 44) = 19.089$, $p < .001$, $R = -.550$, $R^2 = .303$, adjusted $R^2 = .287$, observed power = .990. The null hypothesis was rejected in favor of the alternate hypothesis.

Through exploratory factor analysis the Exercise of Self-Care Agency Scale was factored into four component parts (called the Exercise of Self-Care Agency 2 Scale for the purposes of this study):

- o Motivation/initiative and responsibility (Factor 1)

- o An active versus a passive response to situations (Factor 2)

- o Knowledge and information seeking (Factor 3)

- o Self-worth, self-esteem, self-concept (Factor 4)

The Exercise of Self-Care Agency 2 and Burnout (H_a1_{14})

For the new factored scale, the Exercise of Self-Care Agency 2, the research question was:

RQ1: Is there a statistically significant linear relationship between the exercise of self-care agency 2 and burnout? The results showed:

- $H_a1_{14:}$ There was a statistically significant negative, linear relationship between the Exercise of Self Care Agency 2 and burnout in the population under study.

  $F(1, 44) = 17.179, p < .001, R = -.530, R^2 = .281$, adjusted $R^2 = .264$, observed

power = .982. The null hypothesis was rejected in favor of the alternate hypothesis.

- Each component part of the Exercise of Self-Care Agency 2 Scale achieved an adequate alpha level above .7 and was treated as an independent predictor for analysis. In the Exercise of Self-Care Agency 2 (composite) Scale, there was one research question and four hypotheses considered:

- o Motivation/initiative and responsibility (Factor 1)

H_a1_{15}: There was a statistically significant negative, linear relationship between motivation/initiative and responsibility (Factor 1) and burnout in the population under study. The results showed: $F(1, 44) = 13.978$, $p = .001$, $R = -.491$, $R^2 = .241$, adjusted $R^2 = .224$, observed power $= .955$. The null hypothesis has been rejected in favor of the alternate hypothesis.

o   An active versus a passive response to situations (Factor 2)

H_a1_{16}: There was a statistically significant negative, linear relationship between an active versus a passive response to situations (Factor 2) and burnout in the population under study. The results showed: $F(1, 44) = 14.126$, $p < .001$, $R = -.493$, $R^2 = .243$, adjusted $R^2 = .226$, observed power $= .957$. The null hypothesis was rejected in favor of the alternate hypothesis.

o   Knowledge and information seeking (Factor 3)

H_01_{17}: There was not a statistically significant relationship between knowledge and information seeking (Factor 3) and burnout in the population under study.

The results showed: $F(1, 44) = 2.695$, $p = .108$. The null hypothesis was accepted.

o H_01_{18}: Self-Worth, self-esteem, self-concept (Factor 4)

There is not a statistically significant linear relationship between self-worth, self-esteem, self-concept (Factor 4) and burnout in the population under study. $F(1, 44) = 2.838$, $p = .099$, $R = .246$, $R^2 = .061$, adjusted $R^2 = .039$, observed power $= .378$. The null hypothesis was accepted.

The Exercise of Self-Care Agency 2, Burnout, and Familywise Error Rate

I also determined a Familywise Error Rate of the exercise of self-care agency 2, as a composite total variable. The inference of the scale was that each of the composite parts predicted a portion of the variance in the burnout variable. One approach to the multiplicity of the exercise of self-care agency was the look at the Familywise Error Rate (FWER) where I sought to describe the expected proportion of falsely rejected hypotheses. Table 123 shows the results of the analyses and discovery rate where each predictor was treated as an individual variable using an alpha level of .05.

Table 123

Model Summary of Linear Regression for Burnout

Variable	R	R Square	Adjust. R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Observd Power
ESCA	**-.550**	**.303**	**.287**	**8.44561**	**.303**	**19.089**	**1**	**44**	**.001**	**.990**
ESCA2	**-.530**	**.281**	**.264**	**8.57637**	**.281**	**17.179**	**1**	**44**	**.001**	**.982**
Factors										
Factor 1	**-.491**	**.241**	**.224**	**8.81000**	**.241**	**13.978**	**1**	**44**	**.001**	**.955**
Factor 2	**-.493**	**.243**	**.226**	**9.46884**	**.243**	**14.126**	**1**	**44**	**.001**	**.957**
Factor 3	-.240	.058	.036	9.81678	.058	2.695	1	44	.108	.362
Factor 4	-.246	.061	.039	9.50912	.061	2.838	1	44	.099	.378

Dependent variable was burnout. *Note:* Factor 1 and Factor 2 rejected the null hypothesis as the individual tests. The exercise of self-care agency and the exercise of self-care agency 2 also rejected the null hypothesis as individual variables.

Table 124 shows the results of the analyses where the False Discovery Rate for the exercise of self-care agency and burnout was analyzed using the Benjamini-Hochberg

adjusted *p* value with alpha set at .05. An active versus a passive response to situations

(Factor 2) and motivation/initiative and responsibility (Factor 1) rejected the null

hypothesis in favor of the alternate hypotheses.

Table 124

False Discovery Rate for the Exercise of Self-Care Agency *and Burnout with a P Value of .05*

Variables	Rank of Factors	Original *P* Value	Critical Value	Q Value	Benjamini-Hochberg Adjusted *P* Value	**Significant Using an FDR of .05**
Factor 1	**Factor 2**	**.001**	**.0125**	**.05**	**.001**	**Yes**
Factor 2	**Factor 1**	**.001**	**.025**	**.05**	**.002**	**Yes**
Factor 3	Factor 4	.099	.0375	.05	.132	No
Factor 4	Factor 3	.108	.05	.05	.108	No

Dependent variable was burnout. *Note:* The Benjamini-Hochberg adjusted *p* value for Factor1 and Factor 2 rejected the null hypothesis in the Familywise Error Rate (FWER) analysis at .05.

Table 125 shows the results of the analyses where the False Discovery Rates for

the exercise of self-care agency and burnout were analyzed using the Benjamini-

Hochberg adjusted *p* value with alpha set at .0127 using the formula: $\alpha = 1 - (1 - .05)^{1/4} =$

0.0127. In order to achieve a combined type 1 error rate, each alpha value in the table was

set at 0.0127 for hypothesis testing. With the *p* values listed in ascending order, and with

the adjusted *p* value, an active versus a passive response to situations (Factor 2) and

motivation/initiative and responsibility (Factor 1) rejected the null hypothesis.

Table 125

False Discovery Rate for the Exercise of Self-Care Agency and Burnout with a P Value of .0127

Variable s	Rank of Factors	Original *P* Value	Critical Value	Q Value	Benjamini-Hochberg Adjusted *P* Value	**Significance Using an FDR of .0127**
Factor 1	**Factor 2**	**.001**	**.003173**	**.0127**	**.004**	**Yes**
Factor 2	**Factor 1**	**.001**	**.00635**	**.0127**	**.002**	**Yes**
Factor 3	Factor 4	.099	.00952	.0127	.132	No
Factor 4	Factor 3	.108	.0127	.0127	.108	No

Dependent variable was burnout. *Note:* With an FDR of .127 the Benjamini-Hochberg adjusted *p* value for Factor1 and Factor 2 rejected the null hypothesis in the Familywise Error Rate (FWER) analysis at .0127.

Next, the Benjamini and Hochberg Error Rate (FWER) method of analysis was

compared to the Holm-Bonferroni Familywise Error Rate (FWER) method with the

results shown in Table 126.

The Exercise of Self-Care Agency, Burnout and Holm-Bonferroni

- **Step 1: *p* values ordered from smallest to largest.**

    H_1 = .001

    H_2 = .001

    H_3 =.099

    H_4 =.108

- **Step 2: Holm-Bonferroni formula for the first rank.**

    Holm-Bonferroni = α / (n - rank + 1)

    Holm-Bonferroni = .05 / 4 -1 +1

    Holm-Bonferroni = .05/4 = .0125

- **Step 3: First-ranked (smallest) p – value from Step 1 compared to the alpha level calculated in Step 2.**

  Smallest p value in Step 1 ($H_4 = .001$) < Alpha level in Step 2 (.0125).

  The p value is smaller so the null hypothesis is rejected for this individual test.

- **Step 4: Repeat the Holm-Bonferroni formula for the second rank.**

  Holm-Bonferroni = Target α / (n - rank + 1)

  Holm-Bonferroni = .05 / 4 – 2 + 1

  Holm-Bonferroni = .05 /3

  Holm-Bonferroni = .0167

- **Step 5: Results of the Holm-Bonferroni formula in Step 4 compared to the second-ranked p value.**

  Second ranked p value in Step 1 ($H_2 = .001$) < Alpha level in Step 4 (.0167).

  The p value is smaller so the null hypothesis is rejected for this individual test.

- **Step 6: Holm-Bonferroni formula for the third rank.**

  Holm-Bonferroni = Target α / (n - rank + 1)

  Holm-Bonferroni = 0.5 / 4 -3 + 1

  Holm-Bonferroni = 0.5 /2

  Holm-Bonferroni = .025

- **Step 7: Results of the Holm-Bonferroni formula in Step 6 compared to the third-ranked p value.**

  Third ranked p value in Step 1 ($H_3 = .099$) is not less than Alpha level in Step 6 (.025).

The *p* value of .099 is greater than .025, so the null hypothesis for is the

hypothesis not rejected.

Table 126

Familywise Error Rate (FWER) Comparison Chart for Compassion Satisfaction

Variables	Rank of Factors	Original *P* Value	Critical Value	Q Value	Benjamini-Hochberg Adjusted *P* Value	Significant Using an FDR of .0127
Benjamini-Hochberg Method	**Factor 2**	.001	.00635	.0127	.004	**Yes**
Holm-Bonferroni formula	**Factor2**	.001		.0125		**Yes**
Benjamini-Hochberg Method	**Factor1**	.001	.003173	.0127	.002	**Yes**
Holm-Bonferroni formula	**Factor1**	.001		.0125		**Yes**

Looking at the finding through the lens of the Benjamini and Hochberg Error Rate

(FWER) method the following was found:

- The Benjamini-Hochberg (FWER) agreed with the linear regression analysis that

  motivation/initiative and responsibility (Factor 1) and an active versus a passive

  response to situations (Factor 2) were correct in rejecting the null hypothesis

  using an FDR of .05 for compassion satisfaction, but there was a failure to reject

  the null hypothesis for self-worth, self-esteem, self-concept (Factor 4) in the

  Benjamini-Hochberg FDR at .05 level of significance for compassion satisfaction.

- The Benjamini-Hochberg (FWER) agreed with the linear regression analysis that self-worth, self-esteem, self-concept (Factor 4) and motivation/initiative and responsibility (Factor 1) were correct in rejecting the null hypothesis using an FDR of .05 for secondary traumatic stress, but there was a failure to reject the null hypothesis for an Active versus a passive response to situations (Factor 2) in the Benjamini-Hochberg FDR at .05 level of significance for secondary traumatic stress.

- The Benjamini-Hochberg (FWER) agreed with the linear regression analysis that an active versus a passive response to situations (Factor 2) and motivation/initiative and responsibility (Factor 1) were correct in rejecting the null hypothesis using an FDR of .05 for burnout. The Benjamini-Hochberg (FWER) method also rejected the null hypothesis at the .0127 level of significance for burnout. This discovery rate can also be observed in the Holm-Bonferroni analysis.

Part 2 of the Study

Twenty licensed professional social workers participated in both parts of this study centering on the self-care actions, self-care agency, and compassion satisfaction. The study population of 20 included 18 females (90%), two males (10%). There were seven participants (35%) within the 25 to 34 year age range; five participants (25 %) within the 35 to 44 year age range; five participants (25 %) in the 45-54 year age range; and three participants (15 %) in the 55-64 year age range. The ethnicity of the group included eight (40 %) Whites; one (5 %) Hispanic or Latino; eight (40 %) African

American or Blacks; and three (15 %) who classify themselves as Other. Years of

experience with trauma and crisis included seven (35 %) with 0-5 years of experience;

four (25 %) with 5-10 years of experience; three (15 %) with 11-15 years of experience;

one (5 %) with 16-20 years of experience; four (20 %) with 21-25 years of experience.

There were four ethnic groups represented in the sample. The demographics, or the total

group for Part 2 of the study, can be seen in Tables 127 through 130 and Figures 12

through 15.

The group was divided into a program group and a control group with 10

participants in each group. The program variable in the study was the informational

module, or the between-subjects factor, which had two levels: those who took the

informational module and those who did not. The relationship between groups was

examined through a program/control group format, and the relationship between the

variable of Time was examined through the pretest scores and the posttest scores.

Table 127

Gender: Part 2 of the Study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	18	90.0	90.0	90.0
	Male	2	10.0	10.0	100.0
	Total	20	100.0	100.0	

Table 128

Age Range: Part 2 of the Study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25-34	7	35.0	35.0	35.0
	35-44	5	25.0	25.0	60.0
	45-54	5	25.0	25.0	85.0
	55-64	3	15.0	15.0	100.0
	Total	20	100.0	100.0	

Table 129

Ethnicity: Part 2 of the Study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	White	8	40.0	40.0	40.0
	Hispanic or Latino	1	5.0	5.0	45.0
	African American or Black	8	40.0	40.0	85.0
	Other	3	15.0	15.0	100.0
	Total	20	100.0	100.0	

Table 130

Experience with Crisis and Trauma: Part 2 of the Study

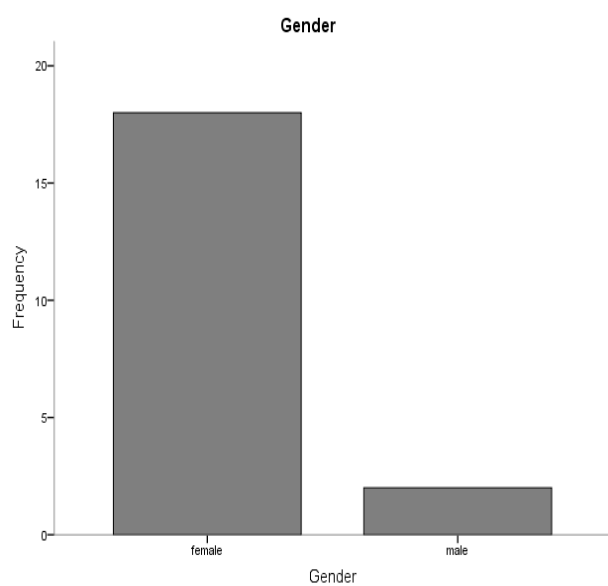|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5	7	35.0	35.0	35.0
	5-10	5	25.0	25.0	60.0
	11-15	3	15.0	15.0	75.0
	16-20	1	5.0	5.0	80.0
	21-25	4	20.0	20.0	100.0
	Total	20	100.0	100.0	

Figure 12. Gender: Part 2 of the study.
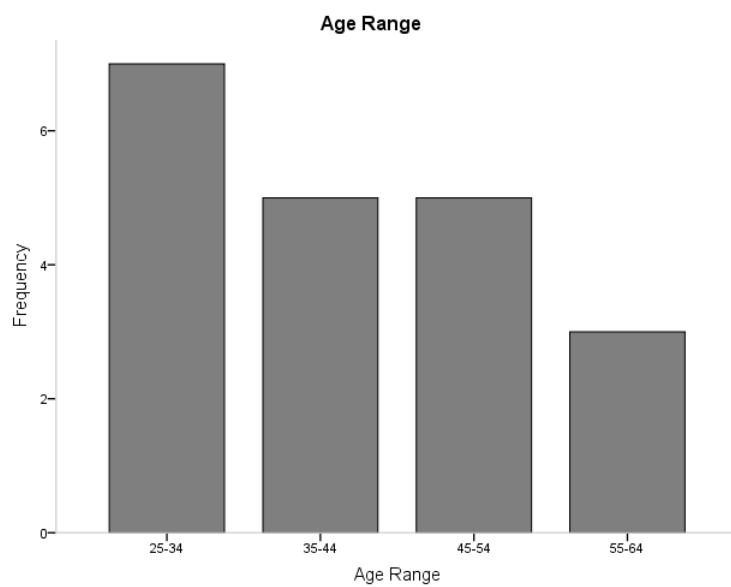
Figure 13. Gender: Part 2 of the study.
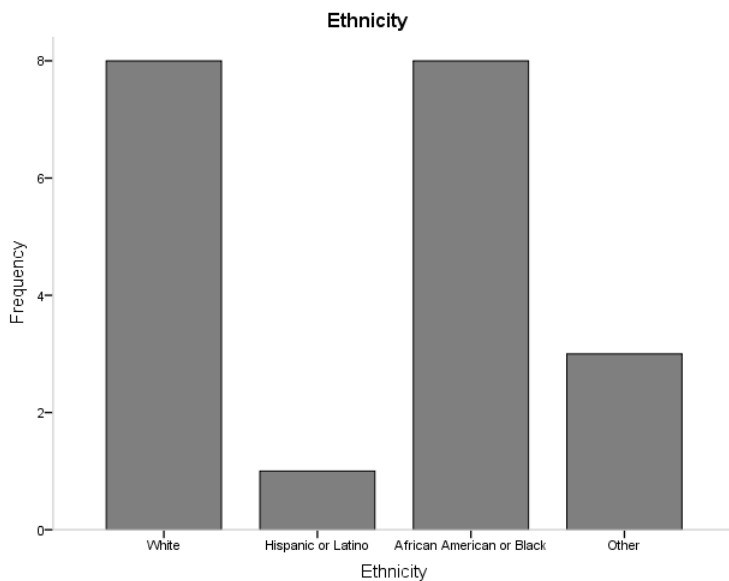
Figure 14. Ethnicity: Part 2 of study.
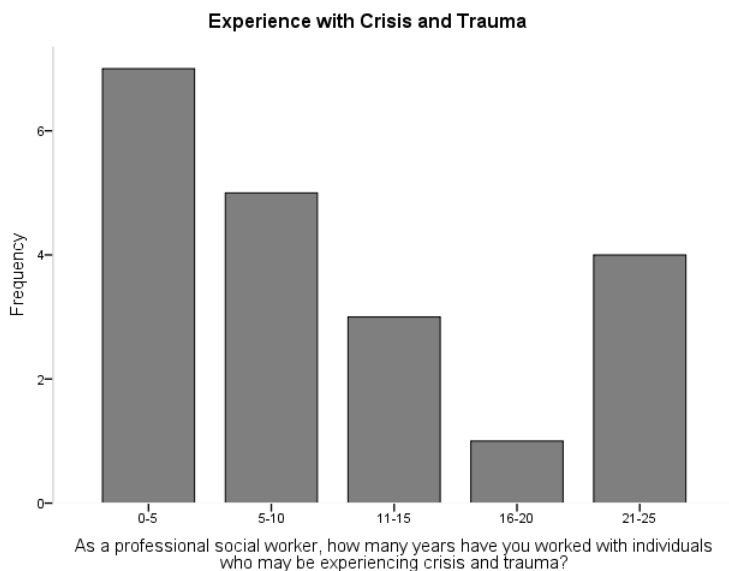
Figure 15. Experience with crisis and trauma: Part 2 of the study.

Before beginning the study, the participants had been randomly assigned to either

the program group or the control group. When beginning the study, a pretest was

administered to all participants. Next, the informational module was made available to

the program group. At least three months after the introduction to the module to the

program group, a posttest was given to all participants, and scores were compared

between the two groups. While the between-subject factor variable, Group, was

examined, the dichotomized within-group factor, Time, was also examined. The variables

to be examined were self-care agency and its four factors and compassion satisfaction in

relation to self-care actions, also referred to as deliberate self-care actions. The raw data

was aggregated and analyzed for these 20 participants. Each participant in the study was

given the option to skip any parts of the study at their discretion. With this option where

the dataset was analyzed with repeated measures analysis, there was an uneven sample

size for the compassion satisfaction variable. To correct for the uneven sample size, the

Select Cases option in SPSS was used to randomly eliminate one case. The final sample

size for the analysis of compassion satisfaction was 20 participants.

Research Questions and Hypotheses

For this part of the study, and for RQ2 and RQ3, participating in the informational

module centering on the repertoire of the participant related to crisis and trauma was

considered deliberate self-care actions. RQ4 examined the relationship between the

exercise of self-care agency and compassion satisfaction when controlling for deliberate

self-care actions. The research question RQ2 asked:

RQ 2: Is there a statistically significantly relationship between self-care actions the

exercise of self-care agency in the population under study? The hypotheses included:

- $H_0 2_1$: There is not a statistically significantly relationship between self-care actions and the exercise of self-care agency in the population under study.

- $H_a 2_1$: There is a statistically significantly relationship between self-care actions and the exercise of self-care agency in the population under study.

- $H_0 2_2$: There is not a statistically significantly relationship between self-care actions and the exercise of self-care agency 2 in the population under study.

- $H_a 2_2$: There is a statistically significantly relationship between self-care actions and the exercise of self-care agency 2 in the population under study.

And, based on the findings on the exercise of self-care agency 2 Scale, additional factored hypotheses could include the subset of hypotheses:

- $H_0 2_3$: There is not a statistically significant relationship between self-care actions and motivation/initiative and responsibility (Factor 1) in the population under study.

- $H_a 2_3$: There is a statistically significant relationship between self-care actions and motivation/initiative and responsibility (Factor 1) in the population under study.

- $H_0 2_4$: There is not a statistically significant relationship between self-care actions and an active versus a passive response to situations (Factor 2) in the population under study.

- $H_a 2_4$: There is a statistically significant relationship between self-care actions and an active versus a passive response to situations (Factor 2) in the population under study.

- H_02_5: In this study, knowledge and information seeking (Factor 3) did not meet the required assumptions for analysis.

- H_02_6: In this study, self-worth, self-esteem, and self-concept (Factor 4) did not meet the required assumptions for analysis.

RQ3-Quantitative: Is there a significant relationship between self-care actions and compassion satisfaction in the population under study?

- H_03_1: There is not a significant relationship between self-care actions and compassion satisfaction in the population under study?

- H_a3_1: There is a significant relationship between self-care actions and compassion satisfaction in the population under study?

RQ4-Quantitative: Is there a statistically significant relationship between the exercise of self-care agency and compassion satisfaction in the social worker population under study when controlling for the self-care actions? The hypotheses included:

- H_04_1: There is not a statistically significant relationship between the exercise of self-care agency and compassion satisfaction when controlling for self-care actions in the population under study.

- H_a4_1: There is a statistically significant relationship between the exercise of self-care agency and compassion satisfaction when controlling for self-care actions in the population under study.

- H_04_2: There is not a statistically significant relationship between the exercise of self-care agency 2 and compassion satisfaction when controlling for self-care actions in the population under study.

- H_a4_2: There is a statistically significant relationship between the exercise of self-care agency 2 and compassion satisfaction when controlling for self-care actions in the population under study.

And, based on the findings on the Exercise of Self-Care Agency 2 Scale, additional factored hypotheses could include the subset of hypotheses:

- H_04_3: There is not a statistically significant relationship between motivation/initiative and responsibility (Factor 1) and compassion satisfaction when controlling for self-care actions in the population under study.

- H_a4_3: There is a statistically significant relationship between motivation/initiative and responsibility (Factor 1) and compassion satisfaction when controlling for self-care actions in the population under study.

- H_04_4: There is not a statistically significant relationship between an active versus a passive response to situations (Factor 2) and compassion satisfaction when controlling for self-care actions in the population under study.

- H_a4_4: There is a significant relationship between an active versus a passive response to situations (Factor 2) and compassion satisfaction when controlling for self-care actions in the population under study.

- H_04_5: In this study, knowledge and information seeking (Factor 3) did not meet the required assumptions for analysis.

- H_04_6: In this study, self-worth, self-esteem, and self-concept (Factor 4) did not meet the required assumptions for analysis.

Descriptive Statistics of the Exercise of Self-Care Agency and Exercise of Self-Care Agency 2

The original Exercise of Self-Care Agency Scale and the reduced the Exercise of Self-Care Agency 2 Scale were analyzed. The Exercise of Self-Care Agency Scale was analyzed a total and a composite scale. Descriptive statistics for the exercise of self-care agency and the exercise of self-care agency 2 can be seen in Tables 131 through 134.

Table 131

Descriptive Statistics of Exercise of Self-Care Agency *and Factors: Part 2 of the Study.*

		ESCA_A	ESCA_B	ESCA2_A	ESCA2_B
N	Valid	20	20	20	20
	Missing	0	0	0	0
Mean		129.1000	130.3000	44.8000	45.7000
Std. Error of Mean		3.80920	4.01320	2.23913	2.11772
Median		127.5000	130.5000	44.0000	45.0000
Std. Deviation		17.03526	17.94758	10.01367	9.47073
Variance		290.200	322.116	100.274	89.695
Range		64.00	73.00	36.00	36.00
Minimum		102.00	93.00	28.00	27.00
Maximum		166.00	166.00	64.00	63.00
Sum		2582.00	2606.00	896.00	914.00

Note: The factors ending in "A" are the pretest factors scores and the factors ending in "B" are the posttest factors scores.

Table 132

M-Estimators: Self-Care Agency and Factors

	Huber's M-Estimator[a]	Tukey's Biweight[b]	Hampel's M-Estimator[c]	Andrews' Wave[d]
ESCA_A	128.3392	127.2312	127.9418	127.1959
ESCA_B	130.1000	130.1669	130.1212	130.1734
ESCA2_A	44.2709	44.1702	44.4238	44.1740
ESCA2_B	45.1277	45.1800	45.5728	45.1814

a. The weighting constant is 1.339.
b. The weighting constant is 4.685.
c. The weighting constants are 1.700, 3.400, and 8.500
d. The weighting constant is 1.340*pi.
e. Some M-Estimators cannot be computed because of the highly centralized distribution around the median.

Table 133

Tests of Normality of Self-Care Agency and Factors: Part 2 of the Study

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ESCA_A	.101	20	.200[*]	.965	20	.656
ESCA_B	.084	20	.200[*]	.990	20	.998
ESCA2_A	.098	20	.200[*]	.977	20	.890
ESCA2_B	.129	20	.200[*]	.970	20	.758

Note. * This is a lower bound of the true significance.
(Lilliefors Significance Correction)

Table 134

Levene's Test of Equality of Error Variances for Exercise of Self-Care Agency *and*

Factors

	F	df1	df2	Sig.
ESCA pretest	.039	1	18	.847
ESCA posttest	.129	1	18	.724
ESCA2 pretest	1.566	1	18	.227
ESCA2 posttest	.414	1	18	.528

Note. Tests the null hypothesis that the error variance of the dependent variable
was equal across groups.

Procedures

In these series of analyses, an "A" attached to a variable denoted a pretest score
and a "B" attached to a variable denoted a posttest score. There were three variables
involved in the analysis: the pretest scores (x) as an independent variable; the
dichotomous variable (w), Group, as a second independent variable; and the posttest
scores (y) as the outcome variable. In the between-subjects analysis, I was seeking to find
out if the two predictor variables, the pretest and the grouping variable, interacted in such
a way as to produce a significant effect on the outcome variable, the posttest scores.

A repeated measure ANOVA was also conducted for both Group and Time. For
the repeated measures ANOVA, the following assumptions were met:

- o For the between-subjects measure there were two levels of measurement.
- o There were no outliers detected in this data set.
- o The dependent variables, the program group variable and the control
  group variable were normally distributed.
- o There was homogeneity of variance.
- o There was homogeneity of the regression slopes.

o   The covariant had a linear relationship to the dependent variable.

The repeated measures ANOVA was conducted on the raw data of the exercise of self-care agency and its four factors and on compassion satisfaction where a pretest was considered the independent variable and a posttest was the dependent variable in the analyses. Results of the repeated measures ANOVA were examined for between-subjects factors and within-subjects factors for Group, and Time. For the Group analysis on the exercise of self-care agency, there were two groups of ten participants. With the variable compassion satisfaction, there were also 20 participants with two scores on the variable for repeated analysis for Time 1 and Time 2. For these analyses, t-scores with a mean of 50 and a standard deviation of 10 were the centering statistical choice.

In this part of the study, deliberate self-care actions were examined through an informational module using a pretest/posttest control group design. There were 20 participants: 10 participating in the program group and 10 participating in the control group. In the analyses both the pretest and posttest scores were included in both separate and multiple comparisons. The tests included paired sample t tests and repeated measured ANOVAs. For the multiple comparisons in the repeated measures ANOVA, I controlled the Familywise error rate by using both Benjamini-Hochberg method and Holm-Bonferroni method. The null hypothesis was that $\mu_1 = \mu_2$ with the alternative hypothesis as $\mu_1 \# \mu_2$.

Paired Samples *T* Test of Self-Care Actions and Exercise of Self-Care Agency (H_02_1)

First, measuring the overall variables comparing the pretest scores and posttest scores, the research question pertained to the exercise of self-care agency and the exercise of self-care agency 2 independently.

RQ 2: Is there a statistically significantly relationship between self-care actions and the exercise of self-care agency in the population under study?

Using a paired sample *t* test to compare the pretest and the posttest means, the results showed: $t(19) = -.524$, $p = .606$. Analyzing this score, the calculated value is not greater than the critical value (-.524 is not greater than 1.729), and looking at the confidence interval at the 95% level (-3.19227 to 1.91411) where zero is contained in that range, this analysis failed to rejected the null hypothesis that there was a significant difference between means.

- *H_02_1:* There was not a statistically significantly relationship between self-care actions and the exercise of self-care agency in the population under study. μ_1 was not significantly different from μ_2 as observed in Table 135. No further hypothesis testing of this relationship was conducted.

Table 135

Paired Samples Test

			Paired Differences						
				Std. Error Mean	95% Confidence Interval of the Difference				Sig. (2-tailed)
		Mean	Std. Deviation		Lower	Upper	t	df	
Pair 1	ESCA t _pre ESCAt _post	-.63908	5.45537	1.2199	-3.1923	1.9141	-.524	19	.606

Paired Samples *T* Test of Self-Care Actions and Exercise of Self-Care Agency 2

(H₀2₂)

Next, the exercise of self-care agency 2 was examined. The research question

was:

RQ 2: Is there a statistically significantly relationship between self-care actions and the

exercise of self-care agency 2 in the population under study?

Using a paired sample *t* test to compare the pretest and the posttest means of the

factored exercise of self-care agency 2, the results showed: $t(19) = -.233$, $p = .818$.

Analyzing this score, the calculated value is not greater than the critical value (.818 is not

greater than 1.729), and looking at the confidence interval at the 95% level (-2.67668 to

2.13966) where zero is contained in that range, this analysis failed to reject the null

hypothesis that there was a significant difference between means.

- *(H₀2₂)*: There is not a statistically significantly relationship between self-care
  actions and the exercise of self-care agency 2 in the population under study. There
  is not a statistically significant difference between the means. No further analysis

was done on the components of the exercise of self-care agency 2 based on the failure to reject the null hypothesis for the total Exercise of Self-Care Agency 2 Scale. μ_1 was not significantly different from μ_2 as observed in Table 136. No further hypothesis testing of this relationship was conducted. Hypotheses 9 through 12 were not analyzed based on the failure to reject the null hypothesis for this analysis.

Table 136

Paired Samples Test

| | | | | Paired Differences | | | | | |
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | t | df | Sig. (2-tailed) |
					Lower	Upper			
Pair 1	ESCA2t_pre ESCA2t_post	-.2685	5.1455	1.1506	-2.6967	2.1397	-.24	19	.818

Paired Samples *T* Test of Self-Care Actions and Satisfaction (H_a3_1)

RQ3-Quantative: Is there a statistically significant relationship between self-care actions (deliberate actions) and the compassion satisfaction in the population under study? Using a paired sample *t* test to compare the pretest and the posttest means, the results showed: $t(19) = 2.183$, $p = .042$. There was a statistically significant difference observed between the pretest and posttest means of compassion satisfaction in the population under study as shown in Table 137.

Table 137

Paired Samples Statistics

			Paired Differences						
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2 tailed)
Pair 1	CS t score_pos CS t score_pre	2.19224	4.49152	1.00433	.09015	4.29434	2.183	19	.042

Compassion Satisfaction and Between-Subject Analysis

Comparing the calculated value to the critical value of 1.729 (2.183 > 1.729), and

looking at the confidence interval at the 95% level (.09015 to 4.29434) where zero was

not in that range, there was a significant difference between the means. The null

hypothesis was rejected in favor of the alternate hypothesis for this paired sample *t* test.

There was a significant linear relationship between the means of the pretest and posttest

of compassion satisfaction.

However, there was not a significant difference between Groups (the pretest

group versus the program group) in compassion satisfaction scores. The results showed:

The results showed that for compassion satisfaction: $(F(1, 18) = 1.475, p = .240, R^2 =.$

076), the effect of Group for compassion satisfaction was not significant as observed in

Table 138 with a hypothesis test of the findings in Table 139.

Table 138

Repeated Measures: Compassion Satisfaction

Source	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Contrast	150.836	1	150.836	1.475	.240	.076
Error	1841.295	18	102.294			

Table 139

Between-Subject Results

Module: Between Subjects Contrast		Averaged Variable Compassion Satisfaction
Level 1 vs. Level 2	Contrast Estimate	-5.492
	Hypothesized Value	0
	Difference (Estimate - Hypothesized)	-5.492
	Std. Error	4.523
	Sig.	.240
	95% Confidence Interval Lower Bound	-14.995
	for Difference Upper Bound	4.010

In a repeated measures ANOVA the results showed:

- There was not a significant difference between Groups (the pretest group versus the program group) in compassion satisfaction scores. For hypothesis testing based on Sum of Squares Type III the mean difference was – 5.492, the standard error was 4.523, and $p = .240$. The Confidence Interval Range for the difference was from -14.995 through 4.010. There was not a significant difference in the repeated measures group contrast of the compassion satisfaction scores.

Compassion Satisfaction and Within-Subject Analysis

There appeared to be a significant difference between Time (Time 1 versus the

Time 2) scores in the within-subject contrast (see Appendix H). The results showed: $F(1,$

$18) = 4.804$, $p = .042$, $R^2 = .211$. The effect of Time 1 (the pretest) and Time 2 (the

posttest) for compassion satisfaction was significant as observed a pairwise difference in

Table 140 and a pairwise comparison shown in Table 141.

Table 140

Paired Samples Statistics

		Paired Differences						
					95% Confidence Interval of the Difference			
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2 tailed)
Pair 1 CS t score_post – CS t score_pre	2.19224	4.49152	1.00433	.09015	4.29434	2.183	19	.042

Table 141

Pairwise Comparisons: Time and Compassion Satisfaction

(I) Time	(J) Time	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
1	2	-2.192*	1.000	.042	-4.294	-.091
2	1	2.192*	1.000	.042	.091	4.294

Note. Results are based on estimated marginal means. The mean difference is
significant at the .05 level. Adjustment for multiple comparisons: Bonferroni.

The mean difference between the Time 1 ($M = 46.373$) and Time 2 ($M = 48.565$)

was -2.192, the standard error was 1.000, and $p = .042$. The confidence interval range for

the difference was from .091 through 4.294. The null hypothesis was rejected and the

alternate hypothesis was accepted for the Time comparison.

Compassion Satisfaction and the Interaction Between Time and Group

The interaction between Time (Time 1 versus Time 2) and Group (Pretest versus

Posttest) was not significant: $F(1, 18) = 1.156$, $p = .257$ as observed in Table 142.

Table 142

Tests of Within-Subjects Contrasts: Time and Group Interaction

Source	Time	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Time	Linear	48.059	1	48.059	4.804	.042	.211	4.804	.545
Time * Group	Linear	11.562	1	11.562	1.156	.297	.060	1.156	.175
Error(time)	Linear	180.088	18	10.005					

Note. Computed using alpha = .05

Further analysis was conducted of the repeated measure ANOVA consisting of

multiple measures to control the Familywise error rate of the hypotheses. Table 143

shows the results of the analyses where the False Discovery Rate for the Exercise of the

repeated measures ANOVA of compassion satisfaction's pretest and posttest scores

analyzed using the Benjamini-Hochberg adjusted *p* value with alpha set at .05. With the

Benjamini-Hochberg adjusted *p* value, the *p* value becomes .126 instead of .042 and not a

significant FDR. Therefore, analyses for Time, Group, and the interaction of Time *

Group all failed to reject the null hypothesis at .05 (FDR) level of significance.

Table 143

False Discovery Rate for the Posttest Versus Pretest of Compassion Satisfaction with a P Value of .05

Variables	Rank of Factors	Original *P* Value	Critical Value	Q Value	Benjamini-Hochberg Adjusted *P* Value	Significant Using an FDR of .05
Time	**1**	**.042**	**.01666**	**.05**	**.126**	**No**
Group	2	.24	.03333	.05	.36	**No**
Time*Group	3	.297	.05	.05	.297	**No**

Analysis: Pretest versus posttest of compassion satisfaction. *Note:* The Benjamini-Hochberg adjusted *p* value for Time, Group and the interaction of Time and Group rejected the null hypothesis in the Familywise Error Rate (FWER) analysis.

Next, the Benjamini and Hochberg Error Rate (FWER) method of analysis was compared to the Holm-Bonferroni Familywise Error Rate (FWER) method.

Holm-Bonferroni of the Exercise of Self-Care Agency and Compassion Satisfaction

- **Step 1: *P*– values order from smallest to largest.**

  $H_1 = .042$

  $H_2 = .240$

  $H_3 = .297$

- **Step 2: Holm-Bonferroni formula for the first rank.**

  Holm-Bonferroni = α / (n - rank + 1)

  Holm-Bonferroni = .05 / 3 -1 +1

  Holm-Bonferroni = .05/3 = .0167

- **Step 3: First-ranked (smallest) *p* value from Step 1 compared to the alpha level calculated in Step 2.**

  Smallest *p* value in Step 1 (H_1 = .042) >Alpha level in Step 2 (.0167).

The *p* value is not smaller than the alpha level, so the null hypothesis is accepted

for this hypothesis.

As observed in the calculations, the Holm-Bonferroni formula also failed to reject

null hypothesis with the adjustment to the *p* value method of calculating the Familywise

Error Rates. Although there was significance noted in the repeated measure of Time 1

versus Time 2, I could not say with a 95% level of significance that the difference

originally observed in the calculations was due to the introduction of the informational

module, or deliberate self-care actions. And, in the Familywise error rate analysis, an

adjustment in the *p* value through the Benjamini-Hochberg method showed that the

adjusted *p* value no longer met the criteria of significance. More research on the

relationship between these variables is needed with a larger sample size.

Additional Analysis of Secondary Traumatic Stress (DV-3) and Burnout (DV-4)

Using a paired sample *t* test to compare the pretest and the posttest means of

secondary traumatic stress, the results showed: $t(19) = .806$, $p = .430$. There was not a

statistically significant difference observed between the pretest and posttest means of

secondary traumatic stress. There was not a statistically significant relationship between

self-care actions (M) and the secondary traumatic stress (DV-3) in the population under

study. No further analysis of this variable was conducted.

Using a paired sample t test to compare the pretest and the posttest means of

burnout, the results showed: $t(19) = 1.332$, $p = .199$. There was not a statistically

significant difference observed between the pretest and posttest means of burnout. There

was not a statistically significant relationship between self-care actions (M) and burnout

(DV-4) in the population under study. No further analysis of this variable was conducted.

Self-Care Agency and Compassion Satisfaction Controlling for Self-Care Actions

(H$_0$4$_1$)

I examined the relationship between self-care agency and compassion satisfaction

when controlling for self-care actions. The research question was:

- RQ4-Quantitative: Is there a statistically significant relationship between self-care

  agency and compassion satisfaction in the social worker population under study

  when controlling for the self-care actions?

First, a general linear model univariate test was used to analyze the effect of the

informational module on the posttest scores of the 20 licensed professional social workers

in this study. In a general linear model, univariate, pairwise examination of the posttests

of exercise of self-care agency and compassion satisfaction, an *F*-test was used to test the

effect of the informational module and these variables. There was a significant positive

linear relationship between the exercise of self-care agency and compassion satisfaction:

$F(1, 19) = 9.106$, $p = .008$. There was not a significant relationship between the module

and the posttest of compassion satisfaction: $F(1, 19) = .373$, $p = .549$. Analyses can be

seen in Tables 144 through 146.

Table 144

Tests of Between-Subjects Effects: Exercise of Self-Care Agency *and Compassion Satisfaction Two Predictor Model (t scores_posttest)*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power
Corrected Model	704.848[a]	2	352.424	5.232	.017	.381	10.464	.757
Intercept	**312.891**	**1**	**312.891**	**4.645**	**.046**	**.215**	**4.645**	**.529**
tESCA_B	**613.375**	**1**	**613.375**	**9.106**	**.008**	**.349**	**9.106**	**.812**
Module	**25.239**	**1**	**25.239**	**.375**	**.549**	**.022**	**.375**	**.089**
Error	1145.066	17	67.357					
Total	51272.430	20						
Corrected Total	1849.915	19						

Note. R = .606. *R* Squared = .381 (Adjusted R Squared = .308).
 Computed using alpha = .05.

Table 145

Tests of Between-Subjects Effects

Dependent Variable: Compassion Satisfaction t score_post

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[c]
Intercept	**Hypothesis**	312.891	1	312.891	4.755	**.043**	.214	4.755	.540
	Error	1146.979	17.43	65.804[a]					
tESCA_B	**Hypothesis**	613.375	1	613.375	9.106	**.008**	.349	9.106	.812
	Error	1145.066	17	67.357[b]					
Module	**Hypothesis**	25.239	1	25.239	.375	**.549**	.022	.375	.089
	Error	1145.066	17	67.357[b]					

a. .037 MS(Module) + .963 MS(Error)

b. MS(Error)

c. Computed using alpha = .05

Table 146

False Discovery Rate for Compassion Satisfaction with a P Value of .05

Variables	Rank of Factors	Original *P* Value	Critical Value	Q Value	Benjamini-Hochberg Adjusted *P* Value	Significant Using an FDR of .05
tESCA_B	**Hyp 1**	**.008**	**.01666**	**.05**	**.024**	**Yes**
Intercept	Hyp 2	.043	.03333	.05	.0645	**No**
Module	Hyp 3	.549	.05	.05	.549	**No**

Note: The Benjamini-Hochberg adjusted *p* value of .024 for the exercise of self-care agency _B rejected the null hypothesis in the Familywise Error Rate (FWER) analysis at a FDR of .05.

- There was a statistically significant relationship between the exercise of self-care agency and compassion satisfaction when controlling for self-care actions in the population under study. There was still a significant difference between the exercise of self-care agency and compassion satisfaction when controlling for the informational module.

Using a hierarchical multiple regression analysis to check the analysis, it was found that the module was controlling for .049 or about 5% of the variance in the outcome of compassion satisfaction and was not statistically significant (β =.119, *t*(.612), *p* = .549). For the total model, 38% of the variance in compassion satisfaction can be explained by the total model ($F(2, 17) = 5.232$, *p* = .017), and 33.2% of the variance in compassion satisfaction was being explained by the predictor the exercise of self-care agency (β = .583, *t*(3.018), *p* = .008). Analyses can be seen in Tables 147 through 149.

Table 147

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.222[a]	.049	-.003	9.88389	.049	.936	1	18	.346
2	.617[b]	.381	.308	8.20712	.332	9.106	1	17	.008

a. Predictors: (Constant), Module

b. Predictors: (Constant), Module, the exercise of self-care agency *t* score

Table 148

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	91.473	1	91.473	.936	.346[b]
	Residual	1758.442	18	97.691		
	Total	1849.915	19			
2	Regression	704.848	2	352.424	5.232	.017[c]
	Residual	1145.066	17	67.357		
	Total	1849.915	19			

a. Dependent Variable: Compassion satisfaction *t* score_post

b. Predictors: (Constant), Module

c. Predictors: (Constant), Module, the exercise of self-care agency *t* score

Table 149
Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	47.572	3.126		15.220	.000
	Module	4.277	4.420	.222	.968	.346
2	(Constant)	19.790	9.565		2.069	.054
	Module	2.283	3.729	.119	.612	.549
	ESCA t score	.583	.193	.585	3.018	.008

a. Dependent Variable: Compassion satisfaction *t* score_post

Results of Part 2

Research question 2 (RQ2).

RQ2: There was not a statistically significant relationship between self-care actions and the exercise of self-care agency in the population under study. The conclusion of the research question and hypothesis that

- H_02_1: There is not a statistically significant relationship between self-care actions and the exercise of self-care agency in the population under study.

  - A paired sample *t* test to compare the pretest and the posttest means showed: $t(19) = -.524, p = .606$.

  - H_02_2: There is not a statistically significant relationship between self-care actions the exercise of self-care agency 2 in the population under study. A paired sample *t* test to compare the pretest and the posttest means of the

factored Exercise of Self-Care Agency 2: The results showed: $t(19) = -.233$, p

= .818.

No further analysis was conducted on the four components of this predictor or the

hypotheses for this predictor ($H_0 2_3$, $H_0 2_4$, $H_0 2_5$, and $H_0 2_6$).

Self-care actions and compassion satisfaction ($H_0 3_1$).

RQ3: There was a statistically significant relationship between self-care actions and

compassion satisfaction in the population under study using linear regression. However,

with the Familywise Error Rate (FWER) the p value was not significant at the .05 level.

Based on the Family-wise Error Rate the conclusion of the research question and

hypothesis that:

- $H_0 3_1$: There is not a statistically significant relationship between self-care actions

  and compassion satisfaction in the population under study.

  o   Although the results showed significance within-subjects from Time 1 to

     Time 2, using a FDR and an adjusted p value, the new p value failed to

     reach significance at .05 alpha level.

I also used the analyses on the other discrete dependent variable of the ProQOL Scale.

Although the informational module did not contribute significantly to the model,

compassion satisfaction was the only variable that responded with significance to

repeated measures that involved the informational module. More analysis of the

relationship between these variables with a larger sample size may is needed.

Exercise of self-care agency and compassion satisfaction, controlling for the

self-care actions ($H_0 4_1$).

RQ4: Is there a statistically significant relationship between the exercise of self-care agency and compassion satisfaction when controlling for the self-care actions in the population under study?

- H_04_1: There was a statistically significant relationship between the exercise of self-care agency and compassion satisfaction when controlling for self-care actions in the population under study. When controlling for the informational module, there was still a significant difference between the exercise of self-care agency and compassion satisfaction. It was found that the module was controlling about 5% of the variance in the outcome of compassion satisfaction but was not statistically significant ($\beta = .119$, $t(.612)$, $p = .549$), and 38% of the variance in compassion satisfaction could be explained by the total model ($F(2, 17) = 5.232$, $p = .017$), with 33.2% of the variance in compassion satisfaction was being explained by the predictor the exercise of self-care agency ($\beta = .583$, $t(3.018)$, $p = .008$).

Because the informational module was not significant, no further analysis was conducted on the four components of this predictor or the hypotheses for this predictor (H_04_2, H_04_3, H_04_4, H_04_5, H_04_6). In Chapter 5 there will be interpretations of the findings of this study. There will also be a discussion of to why this study was conducted and the perceived limitations of the study, and I will discuss the possible benefits of the findings.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

In this study I sought to focus on and discuss the impact of the relationship

between variables believed to be related to empathetic engagement and compassion

satisfaction in the professional social worker in the workplace. This was a two-part study.

The empirical data analyzed in this study was based on the responses of 46 licensed

professional social workers working in the field who were randomly selected from a

particular stratum – licensed social workers with a master's or higher level of training.

The main variables under study were composed of the 30 items from the ProQOL Scale

(Stamm, 2009) and the 43 items of the Exercise of Self-Care Agency Scale (Kearney &

Fleischer, 1979) and its four components: an active versus a passive response to

situations, the individual's motivation, the knowledge base of the individual, and the

individual's sense of self-worth. The ProQOL Scale and Exercise of Self-Care Agency

Scale are shown in this and other studies to exhibit stable values.

In Part 1 of this study, the participant responses were compiled from 46 licensed

professional social workers including 38 females, seven males, and one participant who

preferred not to provide a gender. There were 17 participants within the 25 to 34 year age

range, 13 participants within the 35 to 44 year age range, seven participants within the

45-54 year age range, eight participants within the 55-64 year age range, and one within

the 65-74 year age range. The ethnicity of the group included 27 Whites, one Hispanic or

Latino, 15 African American or Blacks, and three who classified themselves as Other.

Years of experience with trauma and crisis included 12 with 0-5 years of experience, 14

with 5-10 years of experience, 10 with 11-15 years of experience, two with 16-20 years

of experience, five with 21-25 years of experience, and three with 30 plus years of

experience.

With the assistance of the 46 participants, this study showed that the Exercise of

Self-Care Agency Scale had a statsitically significant relationship or an influence on

compassion satisfaction in this study. In Part 1 of the study, the results showed that there

was a moderate, statistically siginificant, positive, linear relationship between the the

following composite variables and compassion satisfaction:

- The 43 item original Exercise of Self-Care Agency Scale

- The 16 item factored Exercise of Self-Care Agency 2 Scale

- Motivation/initiavite and responsibility

- An active versus a passive response to aituations

- Self-Worth, self-esteem, and self-concept

The results also showed that there was a moderate, statistically siginificant, negative,

linear relationship between the the following variables and secondary traumatic stress:

- The 43 item original Exercise of Self-Care Agency Scale

- The 16 item factored Exercise of Self-Care Agency 2 Scale

- Motivation/initiavite and responsibility (Factor 1)

- An active versus a passive response to situations (Factor 2)

- Self-Worth, self-esteem, and self-concept (Factor 4)

The results showed that there was a moderate, statistically siginificant, negative, linear

relationship between the the following variables and burnout:

- The 43 item original Exercise of Self-Care Agency Scale

- The 16 item factored Exercise of Self-Care Agency 2 Scale

- Motivation/initiavite and responsibility (Factor 1)

- An active versus a passive response to situations (Factor 2)

In Part 1 of the study, controlling for the false discovery rates (FDR) using the Benjamini –Hochberg approach to multiple testing (Benjamini & Hochberg, 1995) at the .05 significance level, the following factors also rejected the null hypothesis for the exercise of self-care agency's relationship to compassion satisfaction:

- Motivation/initiavite and responsibility (Factor 1)

- An active versus a passive response to situations (Factor 2)

Controlling for the FDR using the Benjamini–Hochberg approach to multiple testing (Benjamini & Hochberg, 1995) at the .05 significance level, the following factors also rejected the null hypothesis for the exercise of self-care agency's relationship to secondary traumatic stress:

- Motivation/initiavite and responsibility (Factor 1)

- Self-Worth, self-esteem, and self-concept (Factor 4)

Controlling for the FDR using the Benjamini–Hochberg approach to multiple testing (Benjamini & Hochberg, 1995) at the .05 significance level, the following factors also rejected the null hypothesis the exercise of self-care agency's relationship to burnout:

- Motivation/initiavite and responsibility (Factor 1)

- An active versus a passive response to situations (Factor 2)

Twenty participants of the same study sample agreed to take part in the second part of the study centering on the self-care actions, self-care agency, and compassion satisfaction including 18 females (90%), two males (10%). There were seven participants (35%) within the 25 to 34 year age range, five participants (25 %) within the 35 to 44 year age range, five participants (25 %) in the 45-54 year age range, and three participants (15 %) in the 55-64 year age range. The ethnicity of the group included eight (40 %) Whites, one (5 %) Hispanic or Latino, eight (40 %) African American or Blacks, and three (15 %) who classify themselves as Other. Years of experience with trauma and crisis included seven (35 %) with 0-5 years of experience, four (25 %) with 5-10 years of experience, three (15 %) with 11-15 years of experience, one (5 %) with 16-20 years of experience, and four (20 %) with 21-25 years of experience.

The group was divided into a program group and a control group with 10 participants in each group. The program variable in the study was the informational module, or the between-subjects factor, which had two levels: those who took the informational module and those who did not. There was no between group relationships detected in the study. The relationship between groups was examined through a program/control group format, and the within subject relationship of Time was examined through the pretest scores and the posttest scores. The results showed that self-care actions, the dichotomous informational module variable, through the use of repeated measures, Time 1 versus Time 2, did have a statistically significant within-subjects effect (difference) on the compasion satisfaction variable in the population under study. However, a false positive cannot be ruled out at the .05 level of significance.

Interpretation of the Findings

Foundational knowledge and theories were synthesized (see Compton, 1989) from the literature reviewed for this study to develop a linear model. A search of the literature did not reveal any empirical data related to studies that focused solely on the variable of compassion satisfaction, or compassion satisfaction and its relationship to the exercise of self-care agency. Additionally, a literature search also revealed that compassion satisfaction had not been vastly examined empirically as a standalone variable in research. However, secondary traumatic stress had been studied by many researchers (see Bride, 2007; Bride, Robinson, Yegidis, & Figley, 2004; Gill & Weinberg, 2015; Lusk & Terrazas, 2015; Sprang et al., 2011). Researchers like Bride (2007) studied 600 social workers where he investigated "the prevalence of secondary traumatic stress" (p. 63) and found that, for the social worker in the direct practice coming into contact with traumatized populations, it is highly likely for this individual to be secondarily exposed to traumatic events; that many individuals were likely to experience at least some symptoms of secondary traumatic, and a significant minority of individuals may meet the diagnostic criteria for PTSD.

Burnout had also been studied by many researchers (see Jacobson, 2012; Slicum-Gori et al., 2011; Sprang et al., 2007; Thomas, 2013). When considering the young social worker or the social worker beginning a career in the profession, Harr and Moore (2011) conducted a pilot study with 258 BSW and MSW field students at a public university. They looked at the psychological effect of compassion fatigue, secondary traumatic stress and burnout, and compassion satisfaction on social work students in field placement and

found that the risk for compassion fatigue during field experience was similar to that of

more experienced helping professionals (p. 350). Additionally, they found that burnout

scores were somewhat higher than those of other helping professionals (p. 350). It is

suggested that this present study begins to add to the literature on the variable of

compassion satisfaction.

However, based on the literature reviewed, there appeared to be limited

profession-specific prior research on variables related to compassion and the professional

social worker, especially on the variable focusing specifically on compassion satisfaction.

A search of the literature showed that this group of professionals was frequently

aggregated with other professional populations when examining the construct of

compassion, limiting group-specific data. In many studies in the past, researchers took a

cross-sectional approach which can work for and against specific generalizability of the

data for the social work profession, and the work of Sprang et al. (2007) suggested that

there were only a few epidemiological studies on the topic of compassion fatigue or

secondary trauma and burnout among different groups of professionals (p. 261). I sought

to further develop the concept of compassion satisfaction and its relationship to the

exercise of self-care agency by specifically targeting the social worker profession. There

were numerous theories and concepts that helped formulate the empirical findings on the

relationship between the Exercise of Self-Care Agency Scale and compassion satisfaction

arrived at in this study.

The concept of self-care agency in this study was based on the theories of Orem

(1985) presented through the work of Kearney and Fleischer (1979) and the concept of

compassion satisfaction was based on the theories of Stamm (2002, 2009). Additionally, Part 2 of the study was framed on the work of Sousa (2002) who defined self-care agency as one's "ability to recognize his or her own needs, (b) to evaluate personal and environmental resources, and (c) to determine and perform [self-care] actions to achieve a desired goal" (p. 3), which in this study was the outcome of compassion satisfaction.

Orem (1985) put forth that "self-care agency is a human power" (p. 105); but it is not inborn…Activities of self-care must be learned (p. 108); and this learning requires the use of knowledge, "enduring motivation, and skill" (p. 109); where the individual gradually develops a repertoire of self-practices and related skills (p. 109).When synthesizing an interview conducted with Orem in Fawcett (2001), it was conveyed by Orem that:

- Unless one has insights and workable knowledge about a process, this individual is at a loss (p. 35). There is a need of foundational knowledge (p. 35).

- And, unless one has a structured discipline, there is nowhere to come from or advance to (p. 36).

- If one is going to get anyplace in developing a science, one has to have a model of practice science (p. 35).

- One has to have a valid, reliable, general theory and integrate the conceptual elements of the theory with the practice operations (p.35).

- Unless one does that, one is not going to make the theory relevant to practice (p. 35).

Additionally, Comptom (1989) suggested that "borrowed knowledge from other disciplines must be synthesized into conceptual systems" (p. 22), and it was believed at the beginning of this study that the synthesis of the self-care/self-care deficit model developed by Orem did tend to communicate and address a relationship to the compassion satisfaction/compassion fatigue model developed Stamm (2002, 2009).

Through the literature reviewed it was proposed that (a) self-care actions, which are the behaviors or self-care actions in this study, consists of learned behaviors that regulate one's integrity, functioning, and development (McBride, 1987, p. 6). In McBride's (2002) interpretation of Orem's (1985) self-care deficit model, (b) self-care is "the practice of activities that the individual initiates on their own behalf to maintain life and health" (p. 311). And to do so, McBride (1987) proposed that (c) "one must have the necessary knowledge, skill, and motivation: that is, self-agency" (p. 311); and "an inability to meet the demand constitutes a self-care deficit" (McBride, 1987, p. 311). Gatlin (2014) defined self-care as (d) the ability to engage in self-care; and that certain factors can condition or affect an individual's ability to engage in self-care (p. 5).

Orem (1985) proposed that when self-care measures are "executed daily they tend to become integrated into the fabric of daily living" (p. 109) which includes the work environment; that the social worker must have an "openness to self and the environment and know and validate self-care (p. 109); that practices are prerequisites for learning as well as engagement in continuous and effective self-care (p. 109). It is therefore suggested that the social worker "who can produce effective self-care has knowledge of oneself and of environmental conditions, and has confirmed what is appropriate to do

under the circumstances" (p.119); However, before the social worker can confirm the appropriate thing to do, this individual must gain antecedent knowledge of the courses of action open to them; and the effectiveness and desirability of these courses of action (p. 119). It is proposed through this study that enhancing self-care agency is a proper course of action.

I proposed that an understanding of the exercise of self-care agency, as it relates to a psychology of compassion, can advance the field of social work practice; that the structure of Orem's theory as presented by Kearney and Fleischer lends itself to a crossover to the field of the professional of social work. Kearney and Fleischer (1979) cohesively joined four factors to form the collective variable they named the exercise of self-care agency. Their concept was fine-tuned with the assistance of a panel of experts.

The factor analysis of this study's sample population's responses produced the four-factor scale containing 16 items. This factored scale, called the Exercise of Self-Care Agency 2 for the purposes of the study, had a KMO of 77.5, where the 16 items explained approximately 75 % of the variance in the variable, with a reliability index for the reduced scale of .905 ($M = 44.8$, $SD = 11.095$). Reliability indices were also calculated for Factor 1 (.897), Factor 2 (.886) Factor 3(.800) and Factor 4 (.768).When factoring the scale, I sought to keep to the theory of the four components proposed by Kearney and Fleischer. All four factors showed adequate reliability.

Stamm (2009) developed the compassion satisfaction/compassion fatigue model. The work of Stamm (2010) helped me further understand the concept of compassion through the ProQOL Scale. She elaborated on a model of compassion satisfaction and

compassion fatigue, referred to as the compassion satisfaction/compassion fatigue model which helped structure of this study. Stamm (2002) proposed that, in order to holistically understand compassion in professionals like the social worker, one must also look at the interaction of both compassion satisfaction and compassion fatigue, or the compassion satisfaction/compassion fatigue model as shown in Figure 77. This suggestion prompted me to also consider the data from the secondary traumatic stress and burnout scales, collectively termed compassion fatigue.

The Professional Quality of Life (ProQOL) Scale-Version 5 (Stamm, 2009) is based on the compassion satisfaction/compassion fatigue model. Its discrete compassion satisfaction scale, along with the secondary traumatic stress and burnout scales, helped to answer the research questions concerning the exercise of self-care agency as a significant predictor of compassion satisfaction, secondary traumatic stress, and burnout in the social worker population under study, and the degree that one could observe a statistically significant relationship in the population under study. The study began with the examination of the outcome variable of compassion satisfaction.

Compassion satisfaction was described as getting satisfaction, feeling pleasure, pride and invigoration from being able to help people; and being happy and satisfied in the chosen field of social work believing that one can make a difference as a successful helper (Stamm, 2010). A review of the literature revealed that when an individual enters the social work profession, there may be an anticipated sense of satisfaction that can be derived from the job of helping others (Harr & Moore, 2011), and this sense of satisfaction may generate positive feelings that will sustain and nourish the individual

that has chosen a helping profession, or compassion satisfaction. And, with compassion satisfaction, Stamm (2010) relayed that there can be a pleasure gained in doing the job well; while the work of Harr and Moore (2011) proposed that compassion satisfaction contributes to the mental, physical, and spiritual well-being of this helping professional. The research of this study was able to build on to the definition of compassion satisfaction by focusing on the references to positivity suggested by Stamm (2010). In reference to positivity, Isik and Üzbe (2015) defined positive affect as "a combination of joviality, mental alertness, willingness, and determination" (p. 588). While the work of Fredrickson and Losada (2003) proposed that the quality of positive affect can predict resiliency and behavioral flexibility.

A review of the literature also showed that the compassion satisfaction experienced may also be a prime motivator for continued service, even though this worker's job deals with addressing clients who are in crisis situations or are dealing with trauma as a result of crisis (Newell & MacNeil, 2010). Additionally, Dane and Chachkes (2001) explained that the social worker has had a crucial role in healthcare since the introduction of the hospital social worker in the early 1900s. And, today the settings have grown encompassing an even broader range of health care settings that require the social worker to intervene with survivors of trauma. A review of the literature in Chapter 2 also showed that, at the organizational level, the duties this professional may also include the use one's self to restore or enhance the social and psychosocial functioning of both individuals and groups. This can also lead to personal compassion fatigue in the social worker professional.

A review of the literature showed that there should be a conceptual framework shift in research where the focus is on positive elements that lead to professionals like the social worker to flourish in the profession (Harr & Moore, 2011, p. 351; Radey & Figley, 2007; Stamm, 2010). And, although there were few studies to date that have been conducted on compassion satisfaction in the professional as a separate concept, there was literature that focused on human flourishing (Fredrickson & Losada, 2003; Isik & Üzbe, 2015), and Godfrey (2010) supported the contention that an improved senses of well-being, functioning, and quality of life could be achieved through self-care (p. 159).

Continuing with the idea of "borrowed knowledge from other disciplines" (Compton, 1989, p. 22), theories from applied research were considered in the second part of the study where I was looking through the lens of applied behavior analysis and Michael's (2007) concept of a repertoire altering, behavior altering, and value altering effects that may be realized through this study. The basic theoretical framework of using an informational module comes from the work of Baer, Wolf, and Risley (1987) and Cooper et al. (2007). Baer is considered one of the founders of applied behavior analysis, and, along with colleagues Wolf and Risley, produced dimensions for evaluating interventions which are still being used today in the form a tasklist that is structured to help guide this and other research studies. More than 40 years ago, Baer, Wolf, and Risley (1987) first published the seminal work where they proposed seven dimensions or guides to serve as the primary criteria for defining and judging the value of applied behavior analysis. Baer et al. (1987) proposed that:

- Applied research is constrained to look at variables which can be effective in improving the behavior under study (p. 91).

- Applied research is constrained to examining behaviors which are socially important (p. 91).

    And Cooper et al. (2007) proposed that:

- Applied behavior analysis is committed to enhancing and improving the lives of the population (p. 16).

- To meet this criterion, I or a practitioner "must select behaviors to change that are socially significant for participants [including] …self-care…behaviors that improve the day-to-day life experience of the participants" (p. 16).

The informational module, *Tools for Trauma: A CBT Approach* (Baranowsky & Gentry, 2009), was chosen in this study because it seemed to reflect the theories of Baer et al. (1887), Cooper et al. (2009) in the applied field, and the theories of Michael (2007) in relation to personal and environmental factors that could enhance the social worker's repertoire related to the relationship between the exercise of self-care agency and compassion satisfaction. Cooper et al. (2007) suggested that the social worker's repertoire is a collection of knowledge and skills this individual has learned that were relevant to particular settings or tasks (p. 27), and that "all behavior occur within an environmental context" (p. 27). And, for the social worker participating in the *Tools for Trauma: A CBT Approach* informational module, I sought to explore if the infusion of knowledge and skills related to theories of compassion and trauma and its relation to self-

care, combined with interactive self-care enlightenment activities, could affect the outcome of compassion satisfaction in the program group of the sample population.

The objective of the informational module, deliberate self-care actions, was to" add resolution exercises to the repertoire" (Traumatology Institute, 2012, p. 1) of the program group, putting the repertoire "into contact with naturally occurring contingencies of reinforcement" (Cooper et al., 2007, p. 243) in the natural or work environment, looking for a "repertoire-altering" (Michael, 2007) or a repertoire enhancing effect. It was proposed that the social worker participant already possessed knowledge of him/herself and the environment under study, which could be thought of as a type of empirical knowledge; and it was proposed that the social workers had some antecedent knowledge allowing this individual to establish the appropriate action to take. However, this study focused on (1) enhancing the antecedent knowledge of the social worker through an informational module (2) targeting the repertoire enhancement.

Self-Care agency, in this study, was conceptualized a combination of deliberate actions or the action repertoire of the social worker participants (McBride, 1987, p. 7), building on the theories proposed by Michael (2007). Part two of this study provided the opportunity for a real-world investigation where the program group of social worker's enhanced repertoire was "put into contact with naturally occurring contingencies of reinforcement" (Cooper et al., 2007, p. 243); allowing for automatic positive reinforcement to occur when certain behaviors produced positive reinforcing consequences that were not socially motivated (p. 243); promoting maintenance and generalization of the newly acquired behaviors (p. 243) in the natural environment.

Skinner (1950) proposed that "if learning is the process we suppose it to be, then it must appear so in the situations in which we study it…our measures must be relevant and comparable properties…[and] the dimensions of the changes must spring from the behavior itself" (p. 196). Orem (1985) proposed that "understanding self-care as deliberate actions with external and internal orientations is important" (p. 110); that deliberate actions is defined as "purposive goal–or result seeking activity" (p. 115).

It is suggested that if the social worker approaches care with a background of specific knowledge, this individual may see results like integrated functioning (Orem, 1985, p. 115); that deliberate action is essentially action to achieve a foreseen result that is proceeded by investigation, reflection, and judgment to appraise the situation, and thoughtful, deliberate choice of what should be done" (p. 115); that "deliberate action is based on informed judgment about the outcomes being sought from acting a particular way" (p. 115).

This theory was also informed by Sousa (2002) who proposed that self-care agency requires a need or desire to perform self-care actions to achieve a desired goal or outcome; and McBride (1987) who proposed that self-care consists of "deliberate actions taken to achieve a foreseen result, [and] these deliberate actions are preceded by investigation, reflection, and judgment to appraise the situation, and by a thoughtful, deliberate choice of what should be done" (p. 9). Orem's (1985) model and phases one and two of her schema focused on antecedent knowledge, suggest that "deliberate action proceeds step by step toward the achievement of some state that differs in one or more respects from the situation that existed when the action was begun" (p. 117). I also

incorporated the suggestion of Gilbert (2007) into the study that one must first prove to the social worker participant that the consequences are meaningful (p. 257).

One of the perceived benefits of this study was the exposure of the participant to the informational module, *Tool for Trauma: A CBT Approach* (Baranowsky & Gentry, 2010). It is proposed that this informational module provided each participant in the program group with the knowledge of personal and professional tools that could be used to combat the compassion fatigue and promote compassion satisfaction that may arise from working with clients experiencing crisis and trauma - tools that could be beneficial to both the client and the helping professional personally. Goncher, Sherman, Barnett, and Haskins (2013) also highlighted the importance of self-care in the professional social worker suggesting that self-care is a core foundational and functional competency in professional practice and an ethical imperative (p. 54). At the conclusion of the study, the control group was also offered access the informational module.

Based on the results, the practical in-service informational module presented in this study may have enlighten some individual social workers by increasing their knowledge in the theories of self-care related to achieving compassion satisfaction while working in the professional setting of a social worker. And, it may have allowed for the practical applications of theories, like the exercise of self-care agency, now known through this study, to promote the positive outcome compassion satisfaction in the work environment. A positive effect did take place in the repeated measure scores between Time 1 and Time 2. While linear regression showed that there was a statistically significant relationship at .05, a familywise error rate with an adjustment in the *p* value

made for the multiplicity of the variable showed the final p value did not reach the significance level at .05. Therefore, I could not say with 95% accuracy that an effect had taken actually place at that level.

Limitations of the Study

There were limitations to this study which included the sample size and the data collection method. The sample size for this study was small - 46 participants for Part 1 and 20 participants for Part 2. However, statistical significance with moderate effect size was identified in numerous relationships in this study. And, to support the validity of the findings, the data were bootstrapped to enhance discussions on the external validity of the findings. The exercise of self-care agency and the exercise of self-care agency 2 did reach the observed power level of at least .80 in one of the two testings. However, I found that the factored dimensions (Factor 1, 2, and 4) demonstrating relationships did not reach .80 observed power level. It is believed that using a larger sample size would produce more power in the analyses for both linear and familywise error rate measures. In this study, alternate statistical analyses were also conducted to accommodate the smaller sample size for data analysis.

Another limitation of this study was a technical difficulty related to entering the online data collection method created by me. Because I had to use a postcard invitation process to gain participants, unforeseen technical problems had to be corrected on some postcards invitations which delayed a smooth data collection process and may have discouraged some participants. However, the study's contact information was included on the postcard which assisted in correcting the problem.

Generalizing the Findings

The licensed professional social worker with a master's or higher level of training was the population from which the sample population was drawn.

- Through random sampling of the entire strata, each member of the strata was given an equal opportunity to participate in the study.

- Consequently, from this sample I was able to gain insight into the larger strata; and was able to make inferences about the research questions and hypotheses as they applied to the sample and to individuals who possess the same credentialing as those in the entire strata that also adhere to the same practices and codes of conduct through an "implicit theoretical gradient of similarity" (Trochim, 2008, p. 1).

Proximal similarity model/generalizability. Trochim (2008) introduced a possible alternative way to also generalize the results of this study to other populations. This alternative approach discussed by Trochim deals with the ability to generalize using a proximal similarity model suggesting that the external validity of this study can be related to my ability to generalize the findings beyond the sample population of this study to other persons, places, or settings. This generalization compared the validity and reliability values of the sample population of this study to the validity and reliability values of the sample populations in the original study conducted by Kearney and Fleischer looking for an "implicit theoretical gradient of similarity" (Trochim, 2008, p. 1). In the Exercise of Self-Care Agency Scale:

- There were two groups in the original scale's development: 79 nursing students in the first testing and 153 psychology students.

- Both groups represented individuals connected to a helping profession. These groups of participants represented the norming group for the original Exercise of Self-Care Agency Scale.

- The psychology students, the nursing students, and the licensed professional social workers in this present study are very similar statistically.

- All groups are in a helping profession where empathetic engagement with clients who are in trauma or crisis is a requirement of the job.

Summarizing the comparison tables shown in this study, the following statistical similarities were found:

- With equal variance not assumed, there was no statically significant difference between the means of the original study's psychology students and the present study of licensed professional social workers; and that there was no statically significant difference between the means of the original study's nursing students and the present study's licensed professional social workers. I propose that the statistical similarities suggest that there is an implicit theoretical gradient of similarity between the groups.

It was also noted that the split-half reliability between nursing students in the original study of the licensed professional social workers in the current study are the same (.80) and close to the index for the psychology students (.77). It is proposed that this statistical data shows that the groups in the original study, the nursing students and

the psychology students, are proximally similar to the licensed professional social workers in this study through an "implicit theoretical gradient of similarity" (Trochim, 2008, p. 1).

Recommendations

Further research should be undertaken to continue to study the linear relationships that have been found between the exercise of self-care agency and the continuum of compassion in this study.

However, future researchers may need to seek a larger sample size for the research. It is now known, through this research, that there are significant linear relationships between the exercise of self-care agency a continuum of compassion which includes compassion satisfaction and compassion fatigue, with moderate effect sizes. A larger sample size may yield even more statistically significant findings with larger observed power in the relationships. It is proposed that Factor 1, Factor 2, and Factor 4 be researched further with a larger sample size to obtain more power in the analyses. The numerous tables are contained in this study to provide directions for future research on compassion and its relationship to the exercise of self-care agency. The numerous tables are meant to provide initial starting points for future research and analysis of these variables.

Implications

It is proposed that an understanding of the exercise of self-care agency, or deliberate self-care actions, as it relates to a psychology of compassion can advance the field of social work practice for the practitioner and benefit the public at large. A review

of the literature suggested that research is beginning to move toward a conceptual framework shift where the focus on positive elements leading to professionals, like the professional social worker, flourishing in their chosen profession (Harr & Moore, 2011, p. 351; Radey & Figley, 2007; Stamm, 2010). Looking through a lens of positive psychology, it is noted that historically scientific study tended to focus on what was wrong with an individual rather than the enhancement, fulfillment, and productivity in normal people's lives, and the nature of human potential (Brokaw, 2019, p. 3). This study answers the call to begin to focus more research on the positive elements that lead individuals, like the professional social worker, to flourish in their chosen profession, where improved well-being, functioning, and better professional quality of life can be achieved through self-care (Fredrickson & Losada, 2003; Godfrey, 2010; Harr & Moore, 2011; Isik & Üzbe, 2015; Radey & Figley, 2007; Stamm, 2010), with the focal outcome of this study being compassion satisfaction in the work environment.

Individuals, like the professional social worker, choose and professionally train for the profession of social work, conceivably because of the satisfaction derived from helping others (Harr & Moore, 2011), seeking to improve the human conditions of other individuals in our society. And, this sense of satisfaction may generate positive feelings that will sustain and nourish the individual that has chosen a helping profession. In conjunction with this perception, this study provided an avenue for improving the professional quality of life by focusing on the positive element of compassion satisfaction in the work environment.

This study has shown that all three dimensions of compassion – compassion satisfaction, secondary traumatic stress, and burnout –have a statistically significant linear relationship linear relationship with the exercise of self-care agency and the strongest relationships found are supported by the Benjamini-Hochberg (FWER)-that the null hypotheses were rejected appropriately. This realization allows for a positive change in the way compassion in the workplace is approached at the individual, the organizational, and the policy making levels. It is proposed that knowing, and statistically showing, that these elements or variables are dynamically related to each other allows for a shift from focusing on compassion fatigue in the workplace to a shift to focusing on enhancing compassion satisfaction in the workplace, which will also address compassion fatigue simultaneously, based on the data in this study.

Based on the results of the study, at the individual level of practice, the licensed professional social worker could deliberately

- Take the time and care needed to maintain self health;

- Do the designated things that are recommended to support health in the work environment; not putting them off; and

- Carry out resolutions made pertaining to self health like a balanced diet; a planned program for rest and exercise; and take care of self health in general (Kearney & Fleischer, 1979).

And this could directly lead to the social worker

- Getting satisfaction from the job;

- Feeling pleasure;

- Feeling pride and invigoration from being able to help people; and

- Being happy in one's chosen field and believing that they can make a difference as a successful helper (Stamm, 2010).

It is noted that these same deliberate, self-care practices also had a negative linear relationship with secondary traumatic stress and burnout at the same time, showing a statistically significant decrease in these two variables.

The information from this study can also support practice at an organizational level. It can provide empirical data that supports promoting the positive element of compassion satisfaction as a high priority for the organization's efforts to encourage wellbeing through self-care in the workplace. The knowledge and data about relationship between deliberate self-care actions and compassion satisfaction may hopefully supersede the tendency to concentrate on secondary traumatic stress and burnout as variables that provoke a most of the discussion on the construct of compassion, where compassion satisfaction will now, also be a main topic of discussion.

Change at the organizational level, based on the results of this study, may include assisting the individual in fostering deliberate self-care practices by providing in-service, private, online, self-paced modules that target self-care, and can be taken at the social worker's convenience. With an online in-service module, a pre-taped well-structured lectured can be delivered with the same positive vigor to each participant individually. It can also allow for guided practice built into the module. This was the technique used in the present study which showed a positive increase in the scores of compassion satisfaction. Others practices may include

- Stressing to the employees that when self-care measures are "executed daily they tend to become integrated into the fabric of daily living" (Orem, 1985, p. 109) in the work environment.

- Explaining in advance the benefits and value of in-service modules aimed at enhancing compassion satisfaction in the workplace - explaining that compassion satisfaction contributes to the mental, physical, and spiritual well-being (Harr & Moore, 2011) in the work environment.

This study has shown that there was a significant linear relationship between self-worth, self-esteem, and self-concept and compassion satisfaction which could be addressed at the policy making level of an organization. Based on the results of the study, it is proposed that policy makers can show deliberate care actions to its professional members through sharing the positive guiding principles of the social work profession with the public at large. Social change at this level could encompass a positive reframing, to the public at large, of the many contributions of the professional social worker, how the social worker positively impacts the lives of many of the individuals and systems in our society, including their assistance with crisis and trauma situations. This could be done periodically through the media. This positive public and professional support could lead to a healthy professional quality of life for the social work profession and enhanced self-worth and self-esteem. This can assist in building and sustaining well-being in the work environment of social worker professionals.

An understanding of the exercise of self-care agency and its effect on the variance on a continuum of compassion, from compassion satisfaction to compassion fatigue, can

enable an individual or an organization to actively promote flourishing and well-being on the job. By showing empirical evidence through this study that the Exercise of Self-Care Agency Scale and its dimensions of (a) motivation and/or initiative and responsibility; (b) an active versus a passive response to situations, and (c) self-worth, self-esteem; self-concept are significantly, linearly related to compassion satisfaction, activities and themes can be implemented through the job that focus on encouraging these factors in the work environment.

It is believed that an understanding the importance of self-care agency as it relates to compassion satisfaction can lead to positive social change where there may be the realization of improved social worker mental health (Fredrickson & Losada, 2003; Harr & Moore, 2011); and a better understanding may lead to improved social worker retention on the job (Bride, 2007; Fahy, 2007), limiting premature attrition from the profession that the individual has professionally trained for (Bride, 2007; Fahy, 2007). At the individual level, the social worker may experience a transformation of negative affect to positive (Stamm, 2010) or enhanced affect, and the individual social worker may develop or sustain the ability to flourish on the job and experience and mental, physical, and spiritual well-being (Harr & Moore, 2011). The literature review tended to support the contention that a sense of satisfaction may also be a prime motivator for continued service in the field of social work (Harr & Moore, 2011), and this important because the social worker and the social work profession provides many valuable services to the public at large.

Based on the findings from this study that relationships exist between the exercise of self-care agency, or deliberate self-care actions and compassion satisfaction, future research should continue to add to empirical data in this area. It is proposed that with larger sample sizes, more statistically significant relationships may be detected using a pretest/posttest control group/program group design looking elements and relationships that support productivity, enhancement, fulfillment, or wellbeing that leads to a healthy professional quality of life for individuals like the licensed professional social worker.

Conclusion

This study introduced a new linear model that focused the positive elements of flourishing in the work environment of the helping profession like the licensed professional social worker in this study. In reviewing the literature of experts from different structured disciplines, there are many researchers who have developed theories about self-care and the variables that make up the continuum compassion. This study found two separate theories that could be integrated into a theoretical model of practice for this study: theories incorporated in Orem's self-care/self-care deficit practically tested by Kearney and Fleischer (1979), and theories incorporated in the compassion satisfaction/compassion fatigue model practically tested by Stamm (2009). The resulting linear model of integrated theories was practically tested by this study and found to be relevant for application to the population under study.

The results of this study supports the contention in previous literature of a continuum of compassion (Radey & Figley, 2007), or that compassion can be looked at as a type of continuum where there are the polar opposite subconstructs of compassion

satisfaction or positive affect at one end of continuum, and compassion fatigue, or negative affect at the other end. In the literature reviewed for this study, compassion fatigue was defined as a combination of secondary traumatic stress and burnout (Baranowsky & Gentry, 2010; Stamm, 2010). The empirical data in this study also supported the foundational argument that that self-care has an effect on compassion stress and the outcomes that are seen on a continuum of compassion (Figley, 2002; Radey & Figley 2007) as evidenced by the analyses summary tables in this study.

This study showed that there was a positive linear relationship between the exercise of self-care agency, and compassion satisfaction and the effect size was moderate. This study showed that there was a negative linear relationship between the exercise of self-care agency, and secondary traumatic stress and the effect size was moderate. This study showed that there was a negative linear relationship between the exercise of self-care agency, and compassion satisfaction and the effect size was moderate.

The foundation of Part 2 of this study was built on the suggestions of Sousa (2002) who noted that only a few studies had examined the relationship between self-care agency and outcome where self-care actions mediate between self-care agency and outcome. This study chose to examine to see if self-care actions could moderate the relationship between self-care agency and the outcome variable compassion satisfaction. Self-Care agency took the form of self-care actions, or deliberate actions, and the informational module. The hypothesis was if the social worker exercises self-care agency, he or she performs self-care actions or deliberate actions which could lead to the

achievement of a desired outcome (Sousa, p. 3) which in this study would be improved levels of compassion satisfaction.

The overall sample group, as one unit, showed a high level of compassion satisfaction before beginning the study. However, the results of this study showed that self-care actions did contribute to the overall model, but that contribution did not reach the level of significance in the population under study. The change took place within-subjects. With the repeated measures ANOVA, it is believed that this supports the theories of Sousa (2002) that the exercise of self-care agency did relate to the social worker's "ability to recognize his or her own needs, (b) to evaluate personal and environmental resources, and (c) to determine and perform [self-care] actions to achieve a desired goal" (p. 3).

This study showed that some individuals had a change in the within-subjects scores in the program group. It is proposed that by promoting compassion satisfaction through the exercise of self-care agency and deliberate self-care actions, there can be a transformation to affect positive affect where the social worker enhanced, "gained, or sustained the ability to flourish in the work environment" (Harr & Moore, 2011).

The findings suggest that an understanding of self-care agency's relationship to a continuum of compassion can advance the knowledge of how relevant self-care actions can be practically applied to the social worker's work environment. It is proposed that self-care actions or deliberate actions did "enhance and improve the lives" (Cooper et al., 2007, p. 16) of some of the participants in the program group and their day-to-day experience in the work environment. And, if an organization or an individual determines that a

moderate change in compassion satisfaction will bring a substantial positive change to their work environment, and that it is a feasible or worthy goal, then developing goals around the factors found to promote compassion satisfaction and reduce compassion fatigue may provide positive social change in the work environment. Focusing themes surrounding variables and factors found to be statistically related to a significant increased in compassion satisfaction – motivation and initiative and responsibility; an active versus a passive response to situations; and self-worth, self-esteem, and self-concept - can be a method of getting or keeping compassion satisfaction on the job, where compassion fatigue may no longer be looked at as an occupational hazard for the professional social worker. Positive social change can be promoted through positive psychology.

References

Adams, R. E., Boscarino, J. A., & Figley, C. R. (2006). Compassion fatigue and psychological distress among social workers: A validation study. *American Journal of Orthopsychiatry, 7*(1), 103-108. doi:10.1037/0002-9432.76.1.103.

Austin, W., Goble, E. L., & Byrne, P. (2009). Compassion fatigue: The experiences of nurses. *Ethics and Social Welfare, 3*(2), 195-214. doi:10.1080/17496530902951988.

Baird, S. A., & Kracen, A. (2006). Vicarious traumatization, secondary traumatic stress: A research synthesis. *Counselling Psychology Quarterly,19*(2), 181-188.

Baranowsky, A., & Gentry, E. (2010). *Compassion fatigue specialist training workbook (CFST) Accelerated Recovery Program.* Toronto, Ontario: Traumatology Institute (Canada) Training and Development, Inc.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182. https://doi.org/10.1037/0022-3514.51.6.1173.

Beaujean, A. A. (2008). Mediation, moderation, and the study of individual differences. In *Best Practices in Quantitative Methods*. 422-440.

Benjamini, Y., & Hochberg, Y. (1995). Controlling the false discovery rate: A practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society*, *57*(1), 289-300.

Ben-Porat, A., & Itzhaky, H. (2014). Burnout among trauma social workers: The

    contribution of personal and environmental resources. *Journal of Social Work,*

    0(0), 1-15. doi:10.1177/1468017314552158.

Bober, T., & Regehr, C. (2006). Strategies for reducing secondary or vicarious trauma?

    Do they work? *Brief Treatment and Crisis Intervention, 6*(1), 1-9.

    doi:10.1093/brief-treatment/mhj001.

Bourassa, D. (2012). Examining self-protection measures guarding adult protective

    workers against compassion fatigue. *Journal of Interpersonal Violence, 27*(9),

    1699-1715. doi:1177/0886260511430388.

Bride, B. E. (2007). Prevalence of secondary traumatic stress among social workers.

    National Association of Social Workers, 52(1), 63-70. doi:10.1093/sw/52.1.63.

Bride, B. E., & Figley, C. R. (2007). The fatigue of compassionate social workers: An

    introduction to the special issue on compassion fatigue. *Clinical Social Work*

    Journal, 35, 151-153. doi:10.1007/s10615-007-0093-5.

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

    Social Work Journal, 35, 155-163. doi:10.1007/s10615-007-0091-7.

Bride, B. E., Robinson, M. M., Yegidis, B., & Figley, C. R. (2004). Development and

    validation of the Secondary Traumatic Stress Scale. *Research on Social Work*

    Practices, 14(1), 27-35. doi:10.1177/1049731503254106.

Brokaw, D. W. (2019). Positive psychology. *Salem Press Encyclopedia of Health*, 3.

Buchanan, E. M. (2015). Webinar: Moderation Analyses with simple slopes in SPSS + PROCESS. *Statistics of DOOM*, https://www.youtube.com/watch?v=0vcUtzPDGrw.

Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research.* Boston, MA: Houghton Mifflin Company.

Carroll, D. L. (1995). The importance of self-efficacy expectations in elderly patients recovering from coronary artery bypass. *Heart and Lungs, 24*(1), 50-59. Retrieved from http://www.sciencedirect.com/science/article/pii/S0147956305800950.

Cherry, A. J. (2000). *A research primer for the helping professional: Methods, statistics, and writing.* Belmont, CA: Wadsworth, Brooks/Cole: Thompson Learning.

Choi, G. Y. (2011). Organizational impacts on secondary traumatic stress of social workers assisting family violence or sexual assault survivors. *Administration in Social Work, 35*, 225-242. doi:10.1080/03643107.2011.575333.

Çivitci, A. (2015). The moderating role of positive and negative affect on the relationship between perceived social support and stress in college students. *Educational Science: Theory and Practice, 15*(3), 565-573. doi:10.12738/estp.2015.3.2553.

Clemans, S. E. (2005). Recognizing vicarious traumatization: A single session group model for trauma workers. *Social Work with Groups, 27*(2-3), 55-74. doi:10.1300/J009v27n02_05.

Coetzee, S. K., & Klopper, H. C. (2010). Compassion fatigue within nursing practice: A concept analysis. *Nursing and Health Sciences, 12*, 235-243. doi:10.111/j.1442-2018.2010.00526.x.

Comptom, P. (1989). Drug abuse: A self-care deficit. *Journal of Psychosocial Nursing and Mental Health Services, 27*(3), 22-26. doi:10.3928/0279-3695-19890301-10.

Cooper, J. O., Heron, T. E., & Heward, W. L. (2007). *Applied behavior analysis (2nd ed.).* Upper Saddle River, NJ: Pearson Prentice Hall.

Cornille, T. A., & Meyers, T. W. (1999). Secondary traumatic stress among child protective service workers: Prevalence, severity, and predictive factors. *Traumatology, 5*(1), 15-31. doi:10/177/153476569900500105.

Cox, K., & Steiner, S. (2013). Preserving commitment to social work service through the prevention of vicarious trauma. *Journal of Social Work Values and Ethics,10*(1), 52-60.

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

Creswell, J. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches (3rd ed).* Thousand Oaks, CA: Sage Publications.

Cunningham, M. (2004). Teaching social workers about trauma: Reducing the risks of vicarious traumatization in the classroom. *Journal of Social Work, 40*(2), 305-317. doi:10.1080/10437797.2004.10778495.

Curran-Everett, D. (2017). The assumption of normality. *Advances in Physiology Education*, *41*(3), 449-453. doi:10.1152/advan.0064.2017.

Dane, B., & Chachkes, E. (2001). The cost of caring for patients with an illness. *Social Work in Health Care, 32*(2), 31-51. Retrieved from http://dx.doi.org/10.1300/J010v33n02_3.

de Jesus Silva, I., de Oliveira, M. D., da Silva, S. E., Helena, S., Polaro, I., Radunz, V., . . . de Santos, M. E. (2009). Care, self-care and caring for yourself: A paradigmatic understanding though for nursing care. *Rev Esc Enferm USP, 43*(3), 690-695. www.ee.usp.br/reeusp/.

Devilly, G. J., Wright, R., & Varker, T. (2009). Vicarious trauma, secondary traumatic stress or simple burnout? Effect of trauma therapy on mental health professionals. *Australian and New Zealand Journal of Psychiatry*, 373-385. doi:1080/00048670902721079.

Ding, Y., Yu, X., & Wang, S. (2014). The mediating effects of burnout on the relationship between anxiety symptoms and occupational stress among community healthcare workers in China: A cross-sectional study. *PLoS One, 9*(9), 1-9. http://dx.doi.org/10.6084/m9.figshare.1136113. .

Dombo, E. A., & Gray, C. (2013). Engaging spirituality in addressing vicarious trauma in clinical social workers: A self-care model. *Social Work and Christianity, 40(1),* 89-104. .

Edwards, D. M. (1997). Self-care agency and health promoting behaviors of college men and women: Applying the health promoting self-care system model. *Clarkson College, ProQuest Dissertation Publishing*, 1383585.

Elite Research, LLC. (2004). Stats-Moderation/Mediation. 1-11.

    consulting@eliteresearch.com

Elwood, L. S., Mott, J., Lohr, J. M., & Galovski, T. E. (2011). Secondary trauma

    symptoms in clinicians: A critical review of the construct, specificity, and

    implications for trauma-focused treatment. *Clinical Psychology, 31*, 25-36.

    doi:10.1016/j.cpr.2010.09.004.

Ender, P. B. (2003). Introduction to research design and statistics: Mediator vs moderator

    variable. 1-2. www.philender.com/courses/intro/notes/mediator.html.

Fahy, A. (2007). The unbearable fatigue of compassion: Notes from a substance abuse

    counselor who dreams of working at Starbuck's. *Clinical Social Work Journal,*

    35, 199-205. doi:10.1007/s10625-007-0094-4.

Fawcett, J. (2001). The nurse theorists: 21st-Century updates-Dorothea E. Orem. *Nursing*

    Science Quarterly, 14(1), 34-38. SAGE Publications, Inc.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics (4th ed.).* London:

    SAGE Publications, Inc.

Figley, C. R. (2002). *Treating compassion fatigue.* New York, NY: Brunner-Routledge.

    Psychological Stress Series. ISBN-13: 978-1583910535.

Finnigan, K. S. (2008). Teacher satisfaction. In E. Provenzo, & A. Provenzo, *(Eds.),*

    Encyclopedia of the social and cultural foundations of education (pp. 802-804.

    doi:http://dx.doi.org.ezp.waldenulibrary.org/10.4135/9781412963992.n374).

    Thousand Oaks, CA: SAGE Publications, Inc.

Fisher, C. D. (2002). Antecedents and consequences of real-time affective reactions at work. *Motivation and Emotion, 26*(1), 3-30. 0146-7239/02/0300-0003/0 C.

Frankfort-Nachmias, & Nachmias, D. (2009). *Research methods in the social sciences (7th ed.).* New York: Worth.

Fredrickson, B., & Losada, M. F. (2003). Positive affect and the dynamics of human flourishing. *American Psychologist, 60*(7), 678-686.

G*Power 3.1 Manual. (2014).

https://www.psychologie.hhu.de/fileadmin/redaktion/Fakultaeten/Mathematisch-Naturwissenschaftliche_Fakultaet/Psychologie/AAP/gpower/GPowerManual.pdf.

Gatlin, P. K. (2014). The role of executive function between severity of type 2 diabetes and self-care. *Self-Care, Dependent-Care and Nursing, 21*(1), 4-11. http://static1.squarespace.com/static/55f1d474e4b03fe7646a4d5d/t/55f35f5de4b0f b5d95ae3b8c/1442013021353/Vol21_No01_Fall14.pdf .

Gentry, J. E., Baranowsky, A. B., & Dunning, K. (2002). ARP: The accelerated recovery program (ARP) for compassion fatigue. In C. R. Figley, *(Ed.), Treating compassion fatigue* (pp. 123-137). New York, NY: Brunner/Routledge. Psychosocial Stress Series.

Gilbert, T. F. (2007). *Human competence: Engineering worthy performance.* New York: McGraw-Hill Book.

Gill, S., & Weinberg, M. (2015). Secondary trauma among social workers treating trauma clients: The role of coping strategies and internal resources. *International Social Work*, 1-11. doi:1177/0020872814564705.

Godfrey, C. A. (2010). Self-care: A clarification of meaning and examination of
  supportive strategies. 1-386.
  qspace.library.queensu.ca/botstream/1974/6084/1/Godfrey_Christina_M_20109_
  PhD.pdf.

Goncher, I. D., Sherman, M. F., Barnett, J. E., & Haskins, D. (2013). Programmatic
  perceptions of self-care emphasis and quality of life among graduate trainees in
  clinical psychology: The role mediational role of self-care utilization. *Training
  and Education in Professional Psychology, 7*(1), 53-60. doi:10.1037/a0031501.

Green, S. B., & Salkind, N. J. (2011). *Using SPSS for Windows and Macintosh:
  Analyzing and understanding data (6th ed.).* Upper Saddle River, NJ: Pearson
  Education, Inc.

Guo, Y, Logan, H.L., Glueck, D.H., Muller, K.E. (2013). Selecting a sample size for
  studies with repeated measures, *Medical Research Methodology*, 13, 100.
  Http://www.biomedcentral.com/1471-2288/13/100

Harr, C., & Moore, B. (2011). Compassion fatigue among social work students in field
  placement. *Journal of Teaching in Social Work, 31*, 350-363.
  doi:10.1080/08841233.2011.580262.

Hayes, A. J. (2013). *Introduction to mediation, moderation, and conditional process
  analysis: A regression-based approach.* New York: The Guilford Press. Kindle
  Edition.

Houston, D. A. (1990). Empathy and the self: Cognitive and emotional influences on the evaluation of negative affect of others. *Journal of Personality and Social Psychology, 59*(5), 859-868. 0022-3514/90/S00.75.

Howlett, S. L., & Collins, A. (2014). Vicarious traumatisation: Risk and resilience among crisis support volunteers in a community organisation. *South African Journal of Psychology, 44*(2), 180-190. doi:10.1177/0081246314524387 sap.sagepub.com.

Isik, S., & Üzbe, N. (2015). Personality traits and positive/negative affects: An analysis of meaning in life among adults. *Educational Sciences: Theory and Practice, 15*(3), 587-595. doi:10.12738/estp.2015.3.2436.

Jaccard, J. (2001). Interaction between quantitative/continuouus predictors. In/interaction effects in logistic regression. *SAGE Research Methods*, 42-46. SAGE Publications, Inc. http://dx.doi.org/10.4135/9781412984515.

James, R. K. (2008). *Crisis intervention strategies (6th ed.).* Belmont: CA: Brooks/Cole, Cengage Learning.

Jocobson, 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.

Kadambi, M. A., & Truscott, D. (2003). Vicarious traumatization and burnout among therapists working with sex offenders. *Truamatology, 9*(4), 216-230. doi:1177/153476560300900404.

Kanter, J. (2007). Compassion fatigue and secondary traumatization: A second look. *Clinical Social Work Journal, 35*, 289-293. doi:1007/s10615-007-0125-1.

Kapoulitsas, M., & Corcoran, T. (2015). Compassion fatigue and resilience: A qualitative analysis of social work practice. *Qualitative Social Work, 14*(1), 86-101. doi:10.1177/147332501428526.

Kearney, B. Y., & Fleischer, B. J. (1979). Development of an instrument to measure exercise of self-care agency. *Research in Nursing, 2*(1), 25-34.

Kenny, D. A. (2015a). Webinar: Moderator variables: Introduction. *Davidakenny.net*, http://davidakenny.net/webinar/listw.htm#moderation.

Kenny, D. A. (2015b). Webinar: Moderation analysis: Interpretation. *Davidakenny.net*, *http://davidakenny.net/webinars/listw.htm#Moderation*. *Davidakenny.net*,

Kenny, D. A. (2015c). Webinar: Moderation analysis: Assumptions. *Davidakenny.net*, *http://davidakenny.net/webinars/listw.htm#Moderation*. *Davidakenny.net*

Khan, A. A., Khan, M. A., & Malik, N. J. (2015). Compassion fatigue amonst health care providers. *Pakistan Armed Forces Medical Journal, 65*(2), 286-289.

King, S., & Holoako, M. (2012). The development and initial validation of the empathy scale for social workers. *Research on Social Work Practice, 22*(2), 174-185. doi:101177/1049731511417139.

Knussen, C., & McFadyen, A. (2014). Ethical issues involved in using SurveyMonkey. *Swansea University*, 1.

http://www.bps.org.uk/sites/default/files/documents/conducting_research_on_the _internet-guidelines_for_ethical_practice_in_psychological_research_online.pdf.

Krumer-Nevo, M., Slonim-Nevo, V., & Hershenzon-Segev, E. (2006). Social workers

and their long-term clients: The never-ending struggle. *Journal of Social Service

Research*, 27-38. doi:10.1300/J079v33n01_03.

Lambert, E. G., Barton-Bellessa, S. M., & Hogan, N. L. (2015). The consequences of

emotional burnout among correctional staff. *SAGE Open*, 1-15.

doi:10.1177/2158244015590444.

Laureate Education, Inc. (2009a). *Correlation and introduction to regression.* Baltimore:

Author.

Laureate Education, Inc. (Executive Producers). (2009b). Linear Regression: Conceptual.

Author.

Leenerts, M. H., Teel, C. S., & Pendleton, M. K. (2004). Building a model of self-care for

health promotion in aging. *Journal of Nursing Scholarship, 34*(2), 355-361.

doi:10.1111/j.1547-5069.2002.00355.x.

Leon, A. M., Altholz, J. A., & Dziegielewski, S. F. (1999). Compassion Fatigue:

Considerations for working with the elderly. *Journal of Gerontological Social

Work, 32*(1), 43-62. doi:gttp://dx.doi.org/10.1300/JO83v32n01_04.

Levin, A. P., & Greisberg, S. (2003). Vicarious trauma in attorneys. *Pace Law Review,

24*(1), 245-252. Retrieved from Http://digitalcommons.pace.edu/plr/vol24/iss1/11.

Löfgren, K. (2013). *Normality test using SPSS: How to check whether data are normally

distributed*. Retrieved from http://www.youtube.com/watch?v=IiedOyglLn0

Maslach, C. (1976). Burnout. In C. Maslach, & M. P. Leiter, *Reversing burnout: How to rekindle your passion for your work* (pp. 42-49). Stanford Social Innovaton. www.ssireview.com.

Maslach, C. A., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behaviour, 2*, 99-113. www.aagbi.org/sites/default/Maslach.pdf.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout, 52. *Annual Review of Psychology*, 397-422. http://www.annualreviews.org/doi/abs/10.1146/annurev.psych.52.1.397.

McBride, S. (1987). Theory based practice is an essential part of nursing. *Research in Nursing and Health*, 311-316.

Michael, J. (2007). Motivating operations. In J. O. Cooper, T. E. Heron, & W. L. Heward, *Applied behavior analysis (2nd. ed.)* (pp. 373-391). Upper Saddle River: Perason Prentice Hall.

Mineko, Y. (1998). The Exercise of Self-Care Agency Scale. *Western Journal of Nursing Research, 20*(3), pp. 370. http://wjn.sagepub.com.ezp.waldenulibrary.org/.

Miner, A. G., Glomb, T. M., & Hulin, C. (2005). Experience sampling mood and its correlates at work. *Journal of Occupational Psychology, 78*, 171-193. doi:10.1348/096317905X40105.

Nahcivan, N. O. (2004). A Turkish language equivalence of the Exercise of Self-Care Agency Scale. *Western Journal of Nursing Research, 26*(7), 813-824. doi:10.1177/0193945904267599.

Najjar, N., Davis, W., L., Beck-Coon, K., & Doebbeling, C. C. (2009). Compassion

fatigue: A review of the research to date and relevance to cancer-care providers.

Journal of Health Psychology, 14(2), 267-277. doi:10.1177/1359105308100211.

Naturale, A. (2007). Secondary traumatic stress in social workers responding to disasters:

Reports from the field. *Clinical Social Work Journal, 35*, 173-181.

doi:10.1007/s10615-007-0089-1.

Newell, J. M., & MacNeil, G. A. (2010). Professional burnout, vacarious 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, 6*(2), 57-68. Lyceum Books, Inc.

Newell, J. M., & Nelson-Cardell, D. (2014). A competency-based approach to teaching

professional self-care: An ethical consideration for social work education. *Journal

of Social Work Education, 50*, 427-439. doi:10.1080/10437797.2014.917928 .

Nishishiba, M., Jones, M., & Kraner, M. (2014). Comparing means between two groups.

SAGE Publications, Inc. 171-192. doi:http://dx.doi.org/10.4135/9781544307763

Orem, D. E. (1985). *Nursing: Concepts of practice (3rd ed.).* New York: MaGraw-Hill,

Inc.

Orem, D. E. (2001). In J. Fawcett, *The nurse theorists: 21st-Century updates-Dorothes E.

Orem* (pp. 34-38). SAGE Publicatiions, Inc.

Overskeid, G. (2000). Why do we think? Consequences of regarding thinking as

behavior. *The Journal of Psychology, 134*(4), 357-374.

Pack, M. (2009). Back from the edge of the world: Re-authoring a story of practice with stress and trauma using Gestalt theories and narrative approaches. *Journal of Systemic Therapies, 27*(3), 30-44.

Patton, M. Q. (2002). *Qualitative research and evaluation methods (3rd ed.).* Thousand Oaks, London: Sage Publications, Inc. .

Perron, B. E., & Hiltz, B. S. (2006). Burnout and secondary trauma among forensic interviewers of abused children. *Child and Adolescent Social Work Journal, 23(2)*, 216-234. doi:10.1007/s10560-005-0044-3.

Pooler, D. K. (2011). Professional flourishing: Re-visioning self-care using imago dei. *Social Work and Christiansaity, 38*(4), 440-452. Retrieved from http://web.b.ebscohost.com.ezp.waldenulibrary.org/ehost/pdfviewer/pdfviewer?sid=c8f9de0d-bd55-4bc3-b0eb-fab5e3fd2403%40sessionmgr113&vid=6&hid=110.

Professions. (2015). *Social Worker.* XX: Board.

Radey, M., & Figley, C. R. (2007). The social psychology of compassion. *Clinical Social Worker Journal, 35*(3), 207-214. doi:10.1007/s10615-007-0087-3.

Ray, S. L., Wong, S., White, D., & Heaslip, K. (2013). Compassion satisfaction, compassion fatigue, work life conditions, and burnout among frontline mental health care professionals. *Traumatology, 19*(4), 455-467. doi:10.1177/1534765612471144.

Riesch, S. K., & Hauch, M. R. (1988). The exercise of self-care agency: An analysis of construct and discriminant validity. *Research in Nursing and Health, 11*(4), 245-255. doi:10.1002/nur.4770110406;

http://dx.doi.org.ezp.waldenulibrary.org./10.1002/nur.4770110406; (AN: 1989-
10643-001 from PsycINFO).

Salloum, A., Kondrat, D. C., Johnco, C., & Olson, K. R. (2015). The role of self-care on
compassion satisfaction, burnout, and secondary trauma among child welfare
workers. *Children and Youth Services Review, 49*, 54-61.
doi:10.1016/j.childyouth.2014.12.023.

Sansbury, B. S., Graves, K., & Scott, W. (2015). Managing traumatic stress responses
among clinicians: Individual and organizational tools for self-care. *Trauma, 17*(2),
114-122. doi:10.1177/1460408614551978.

Schaufeli, W. B., Leiter, M. P., & Maslach, C. (2009). Burnout: 35 years of research and
practice. *Career Development International, 14*(3), 204-220.
doi:10.1108/13620430910766406.

Skinner, B. F. (1950). Are theories of learning necessary? *Psychological Review, 57*, 193-
216. www.yorku.ca/dept/psych/classics/index.htm.

Slicum-Gori, S., Hemsworth, D., Carson, A., & Kazanjian, A. (2011). Understanding
compassion satisfaction, compassion fatigue and burnout: A survey of the hospice
palliative care workforce. *Palliative Medicine, 27*(2), 172-178.
doi:10.1177/0269216311431311.

Smart, D., English, A., James, J., Wilson, M., Daratha, K. B., Childers, B., & Magera, C.
(2014). Compassion fatigue and satisfaction: A cross-sectional survey among US
healthcare workers. *Nursing and Health Sciences, 16*, 3-10.
doi:10.1111/nhs.12068.

Sȯderhamn, O. (2000). Self-care activity as a structure: A phenomenological approach. *Scandinavian Journal of Occupational Therapy, 7*, 183-189.

Social Science Statistics (2018). T Test calculator for 2 dependent means. https://www.socscistatistics.com/tests/ttestdependent/Default.aspx

Sousa, V. D. (2002). Conceptual analysis of self-care agency1(3). *Online Brazilian Journal of Nursing*, http://www.uff.br/nepae/objn103sousa.htm.

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. doi:10.1080/15325020701238093.

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.

Stamm, B. A. (2016). *Professional Quality of Life: CS and CF*. Retrieved from ProQOL.org: http://www.proqol.org/CS_and_CF.html

Stamm, B. H. (2002). Measuring compassion satisfaction as well as fatigue: Developmental history of compassion satisfaction and fatigue test. In C. R. Figley, *(Ed.), Treating compassion fatigue* (pp. 107-123). New York: NY: Brunner/Routledge. Psychological Stress Series.

Stamm, B. H. (2009). Professional Quality of Life: Compassion Satisfaction and Fatigue Version 5 (ProQOL) . *www.isu.edu/~bhstamm or www.proqol.org*.

Stamm, B. H. (2010). *The concise ProQOL manual (2nd ed.).* Pocatello, ID: The ProQOL.org. http:/www.proqol.org/CS_and_CF.html.

Swansea University. (2011). Ethical considerations in using on-line surveys. 1.

https://www.swansea.ac.uk/humanandhealthsciences/research/research-ethics-

committee/ethicalconsiderationsinusingon-linesurveys/.

Tabaj, A., Pastirk, S., Bitenc, C., & Masten, R. (2015). Work-related stress, burnout,

compassion, and work satisfaction, of professional workers in vocational

rehabilitation. *Rehabilitation Counseling Bulletin, 58*(2), 113-123.

doi:10.1177/0034355214537383.

Thomas, J. (2013). Association of personal distress with burnout, compassion fatigue,

and compassion satisfaction among clinical social workers. *Journal of Social

Service Research, 39*, 365-379. doi:1080/014388376.2013.771596.

http://www.tandfonline.com/doi/pdf/10.1080/01488376.2013.771596.

Trippany, R. L., Kress, V. E., & Wilcoxon, S. A. (2004). Preventing vicarious trauma:

What counselors should know when working with trauma survivior. *Journal of

Counseling and Development, 82*(1), 31-38.

https://scholar.google.com/scholar?q=preventing+vicarious+trauma&btnG=&hl=

en&as_sdt=0%2C41.

Trochim, M. K. (2006). Quasi-experimental design: The regression discontinuity design.

Research Methods: Knowledge Base,

http://socialresearchmethods.net/kb/quasird.php.

van Minnen, A., & Keijsers, G. P. (2000). A controlled study into the (cognitive) effects

of exposure treatment on trauma therapists. *Journal of Behaviour Therapy and

Experimental Psychiatry, 31*, 189-200.

Wadsworth Cengage Learning. (2006). *Surveys*. Retrieved from

http://wadsworth.cengage.com/psychology_d/templates/student_resources/worksh

ops/res_methd/surveys/surveys_01.html

Williams, M. B. (1998). What is compassion fatigue? Compassion stress/secondary

traumatization burnout countertransference reactions. *When helping hurts:*

Sustaining trauma workers. [Video file]. Gift from Within. Retrieved from

Counseling and Therapy in Video: Volume 1.

Wong, C. L., Ip, W. Y., & Shiu, T. I. (2012). Exercise of Self-Care Agency Scale-

Chinese-Cantonese (ESCAS) version. *International Journal of Nursing Studies,*

49(9), 1112-1137. doi:10.1037/t18732-000.

Wuensch, K. L. (2013). Cronbach's alpha and maximized Lambda4.

http://core.ecu.psyc/wuenschk/MV/alpha.doc.

Wuensch, K. (2003). Quasi-Experimental design.

Yamashita, M. (2004). A Turkish language equivalence of the exercise of self agency

scale. *Western Journal of Nursing Research, 20*(3), 370-381.

doi:10.1177/019394599802000308.

Yi-Chang, L., Yu, C., & Chin-Cheh, Y. (2014). The effects of positive affect, person-job

fit, and well-being on job performance. *Social Behavior and Personality, 42*(9),

1537-1548. http://dx.doi.org/10.2224/sbp.2014.42.9.1537.

Yoder, E. A. (2010). Compassion fatigue in nurses. *Applied Nursing Research, 23*, 191-

197. doi:10.1016/j.apnr.2008.09.003.

Zaki, J. (2014). Empathy: A motivated account. *Psychological Bulletin, 140*(6), 1608-
    1647. http://dx.doi.org/10.1037/a0037679.

Appendix A: IRB Approval

Dear Ms. Carter,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "***The Impact of Self-Care Agency and Compassion Satisfaction on the Professional Social Worker***."

Your approval # is 11-07-17-0237785. You will need to reference this number in your dissertation and in any future funding or publication submissions.

Congratulations!

Research Ethics Support Specialist

Appendix B: 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 the number that honestly reflects how frequently you experienced these things in the last 30 days.

  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. 27

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 C: The Exercise of Self-Care Agency Scale

0 = Very Uncharacteristic
1= Somewhat Characteristic
2 = No Opinion
3 = Somewhat Characteristic
4 = Very Characteristic

1. I would gladly give up some of my set ways if it meant improving my health.

2. I like myself.

3. I often feel that I lack the energy to care for my health needs the way I would like

    to.

4. I know to get the facts I need when my health feels weakened.

5. I take pride in doing the things I need to do in order to remain healthy.

6. I tend to neglect my personal needs.

7. I know my strong and weak points.

8. I seek help when unable to care for myself.

9. I enjoy starting new projects.

10. I often put off doing things that I know would be good for me.

11. I usually try home remedies that have worked in the past rather than going to see

    doctor or nurse for help.

12. I make my own decisions.

13. I perform certain activities to keep from getting sick.

14. I strive to better myself.

15. I eat a balanced diet.

16. I complain a lot about the things that bother me without doing much about them.

17. I look for better ways to look after my health.

18. I expect to reach my peak wellness.

19. When I have a problem, I usually want an expert to tell me what to do.

20. I deserve all the time and care it takes to maintain my health.

21. I follow through on my decisions.

22. I have no interest in learning about my body and how it functions.

23. If I am not good to myself, I believe I cannot be good for anyone else.

24. I understand my body and how it functions.

25. I rarely carry out the resolutions I make concerning my health.

26. I am a good friend to myself.

27. I take good care of myself.

28. Health promotion is a chance thing for me.

29. I have a planned program for rest and exercise.

30. I am interested in learning about various disease processes and how they affect me.

31. Life is a joy.

32. I do not contribute to my family's functioning.

33. I take responsibility for my own actions.

34. I have little to contribute to others.

35. I can usually tell that I am coming down with something days before I get sick.

36. Over the years I have noticed the things to do that make me feel better.

37. I know what foods to eat to keep me healthy.

38. I am interested in learning all that I can about my body and the way it functions.

39. Sometimes when I feel sick I ignore the feelings and hope it goes away.

40. I seek information to care for myself.

41. I feel I am a valuable member of my family.

42. I remember when I had my last health check and return on time for my next one.

43. I understand myself and my needs pretty well.

Components and indicants of the exercise of self-care agency (Kearney & Fleischer, 1979. 'Development of an instrument to measure the exercise of self-care agency' in *Research in Nursing, 2*(1), 25-34. *Note*. The following items are reverse scored: 3, 6, 10, 16, 19, 22, 25, 28, 32, 34, and 39.

Appendix D: 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]

Permission granted by
Beth Hudnall Stamm, PhD
Author, ProQOL
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   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.

Thank you for completing the form for permission to use the ProQOL. This page provides access to permission letters. It also specifies the terms of use.

Please read the FAQs if you have questions about use. Most of the time you will find your answer there.

If you wish to use the ProQOL for non-commercial purposes, simply download the Permission to use the ProQOL form below. The form you submitted will be on record with our office so that we will know you requested permission. Make sure to keep a copy of the information you submitted with your use permission form. Together, the information you submitted and this page are your permission. These letters alone are not sufficient without a copy of the use permission form.

In the spirit of helping others, we assume that you will use the ProQOL for good. By submitting your form and downloading the permissions, you agree to the following conditions.

- You agree to always use the ProQOL or work associated with it in an ethical manner appropriate to human rights policies of the United Nations including *The United Nations Universal Declaration of Human Rights*. You may have other requirements based on your setting such as permission from a Human Subjects committee such as is common at Universities. The ProQOL.org does not have a Human Subjects review process. You must find that locally.
- You agree to always use the ProQOL in culturally sensitive ways.
- If you collect data, you agree to manage and protect your data the legal and ethical management of data in your employment, training or volunteer setting. For example, if you are from the United States or a European country doing research in a developing nation, you will be held to the procedures of your organization in the United States or European country.
- You, or someone with whom you work, will not profit directly from selling the ProQOL or products that rest in large part on the ProQOL. The ProQOL can be freely used as part of a school course, training curriculum or in a book or journal when it is not the substantial part of the work.
- We encourage you to review and use the Best Practices Parameters from the International Society for Traumatic Stress Studies. To find more about these, go to the International Society for Traumatic Stress Studies website at www.istss.org. Among others there are parameters for Trauma Research and Teaching and Training about Trauma, and International Training Guidelines.

I wish you the very best as you use the ProQOL. Please do consider donating a copy of your data. You can find more information about data donations at the Donate Data page on the ProQOL site.

Beth Hudnall Stamm
Developer and Director, ProQOL.org

Permission to Use ProQOL --This permission must accompany any other permissions

Additional Permissions -- Make sure that you have the above *Permission to Use* letter above.

Permission for Wording Changes
Most wording changes do not need additional permission. Here are the guidelines for permission to edit wording changes. You may substitute the appropriate target group for / [helper] / if that is not the best term. For example, if you are working with teachers, replace / [helper] /with teacher. Word changes may be made to any word in italicized square brackets to make the measure read more smoothly for a particular target group. *You may not substantially change the wording of a question because it may negate the known reliabilities and validates of the measure.*

Permission for Format Changes
No additional permission is needed to change the format of the ProQOL such as re-typing it to fit into a training package or for accommodating a disability or language. You may not change the format to provide a public online form that returns a score to an end user. If you wish to do this type of application, it falls under the Permission to Reprint below. You may put the ProQOL in a format that returns the score to a user for research or training as long as the link is not publicly advertised. Here is the guidance for format changes. *You are granted permission to convert the ProQOL into other formats such as a computerized or taped version for the visually impaired.* If you are required to provide documentation for changing words to make the measure more appropriate to your target population, provide the requester this page and the Permission for Use letter from above.

Permission to Translate
You will find the existing translations at measures page. They may be of use to you as your work on your translation. If you are updating one of the older versions of the ProQOL to the current, v5 version, you can find the line-out comparison of the IV to 5 on the Measures Page. Any translations or translation improvements you can offer would be graciously accepted. When you finish your translation, I hope you will send a copy to us so that we can post it for others to use.

Permission to Reprint

The ProQOL is a publically available measure that is free for non-commercial use. If you wish to publish the ProQOL in a print or electronic media outlet, you will need what is called *permission to reprint.** Obtaining permission is usually a simple process because we work with you to make the ProQOL available to as many people as possible.

Examples of media outlets we can generally give permission for reprint without any special permission:

- Print Media: newspapers, newsletters, books, journals and similar venues
  - Electronic Media: non-commercial online use that **do not return data to the end user**, podcast, webinars, books on tape, news media and similar venues
- Examples of media outlets that require special negotiated permission:
  - Films, videos, website forms other than research program, particularly if they return automated scoring, commercial online training courses, commercial training programs in which the ProQOL could be interpreted as adding to the monetary value of the class and other similar uses. Click here to discuss additional permissions.
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this instrument will be used in my disse

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Proposed wording change
(if appropriate):

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Please tell us what
language and if you want
to create a new translation
or improve an existing one.

Type of Format Change:

First or Given Name:	Elaine
Family or Last Name:	Carter
Organization (if appropriate):	Walden University/PhD D
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Address 2:	
City:	~~████~~
Postal Code:	~~███~~
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State or Provence:	~~█████~~
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Appendix E: Permission to Use the ProQOL Diagram

Compassion Satisfaction & Compassion Fatigue Slide Stock Slides for Public Use

- I try to keep as much of the ProQOL as possible free to use. You will find permission and terms of use in multiple places. © B. Hudnall Stamm, 2009. *Professional Quality of Life: Compassion Satisfaction and Fatigue Version 5 (ProQOL).*
- This test and accompanying materials may be freely copied as long as (a) author is credited, (b) no changes are made, and (c) it is not sold.
- The slides do have a copyright showing on the bottom left. This means that the ProQOL slides are copyrighted to me but this slide grants you permission to freely use them.
- In the case of these templates, there are special considerations listed here.
- **You can**
  Change the format.
- Add your name and organizational information.
- Add, rearrange, or remove slides to fit your presentation.
- Print them for handouts.
- Copy them for sharing with others who are working with Compassion Satisfaction and Compassion Fatigue and related things.

- **You cannot**
  Sell the slides. We recognize that courses are for profit or the presenter takes a honorarium. This is not in violation of the use agreement on the slides. What is in violation is specifically selling the slides themselves.
- Use them without proper credit. The copy right information is on the slides.
- Use them without including the ProQOL.org website.
- Use them in any way that is illegal or otherwise prohibited by an ethics or other oversight board that is associated with your activities.
- Include them in any print or electronic media publication that involves a copyright. Examples would be including them in a text book, a news article, a taped book, or a website. If you would like to use them in this way, we are usually happy to provide permission to reprint.

- **What does it mean that the ProQOL cannot be sold?**
- In some cases your presentation will be a commercial where participants pay a fee to take the course. You may use the materials freely as long as the materials are not sold separately from the overall course that is being sold. Another guidance as to whether the ProQOL is being sold is whether or not the ProQOL is used in advertising for the program in such a way that it appears the course is the vehicle of access to the ProQOL.
- If the ProQOL materials are part of your training, paid or otherwise, I do not deem that you are charging for the ProQOL itself.
- Please review the information at www.proqol.org, especially the FAQs.

Appendix F: Permission to use the Exercise of Self-Care Agency Scale

From: Barbara Fleischer ███████████████████
Sent: Monday, April 30, 2018 8:39:12 PM
To: Elaine Carter
Subject: Re: The use of your measurement instrument ESCAS

Dear Elaine,

I am now retired and am happy to grant you permission to use the ESCA instrument. The directions for scoring are found on page 31 of the original article (attached). The Likert scale scoring for each item would go from 0 (very uncharacteristic of me) to 4 (very characteristic of me, while the negatively worded items (listed on page 31) would be given 4 points if the person rated the item as "very uncharacteristic of me" and a 0 if they rated it as "very characteristic of me." Some of the items were "reverse scored" to avoid a response bias on the part of respondents. I hope this makes sense. If not, please let me know.

I wish you well on your research and would be very interested in receiving a copy of your results.

Thank you,
Barbara Fleischer

Appendix G: Permission to use the Exercise of Self-Care Agency Diagram

Barbara Fleischer ██████████████████
Tue 5/8/2018 11:09 PM

To: Elaine Carter

Dear Elaine,

Please feel free to use the diagram that what used to construct the ESCA; just please cite the article as the reference for it. We developed the diagram to help us generate items that would cover the various dimensions of self-care agency. It provided the basic map from which we could develop items. However, we did not attempt to correlate each item with a particular component. We were attempting to develop an overall measurement of self-care agency, without developing sub-scales (with construct validity studies for each sub-scale). I know this instrument has been used in many research studies. A factor analysis study would be able to provide the quantitative data needed to identify sub-components of the ESCA. I hope this helps.

best wishes, Barbara

On Sat, May 5, 2018 at 4:23 PM ██████████████████████████████████████ > wrote:

███████████████

Barbara J. Fleischer, PhD

Appendix H: Self-Care Actions and Compassion Satisfaction (Time)

Estimated Marginal Means of Self-Care Actions and Compassion Satisfaction (Time)