

Resilience to Compassion Fatigue in Empathic Healthcare Professionals

by

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

General Psychology, Research and Evaluation

Walden University

December 2012

Abstract

In 2002 Figley conducted a case study illustrating a problem that was originally observed in 1992 among nurses, compassion fatigue (CF). CF has since been extended to embrace all healthcare service providers, an employment sector that has been in recent decline. However, some health professionals seem resilient and do not develop CF. Therefore this study will explore aspects of lived or observed resiliency to CF among a population of healthcare providers to find the collective essence of healthcare professionals' experience of resiliency to compassion fatigue. An approach based upon the qualitative methodologies of Moustakas and van Manen is proposed to investigate the phenomenon. Data will be gathered through in-depth, open-ended interviews of nine healthcare professionals. The transcribed interviews will be organized using NVivo 10 software before being analyzed. The implications for positive social change from the proposed research include the benefits of the healthcare professional's personal health, as well as patient care, of more effective policies at the facility level for in-service CF training and intervention, and for the prospect of a rise of economic productivity in services at the community level.

Dedication

I dedicate this research study and dissertation to all caring, empathic healing professionals, to my three caring children, Michael P. Lipscomb, Melissa Ganus, Celia Ganus, and to my six grandchildren.

Acknowledgments

Many people have been important to me in this collection and understanding of resilience to compassion fatigue, particularly Dr. Pat Carmoney, my chair, Rev. Alicia Grace, Dr. Erika Campbell, Dr. Carolyn King, and Dr. Robin Friedman. Their guidance has added richness, depth, and quality to my study.

Marilyn Warner, a dear friend, unknowingly provided me with the impetus. She is a compassionate woman who worked in a field which has a high incidence of compassion fatigue, but she did not succumb to it. Her resilience is the flame which lit this study's lamp. The interest shown by each healthcare professional with whom I talked about the project, particularly Karen Odle and Lenise Taylor, brought home to me the significance of the study.

Helen Woolsey Hall, my aunt, and Channing Stevens Smith, my father, inspired me to return to school in my advanced years. They each received advanced degrees in their "mature" years, showing how well we can continue to learn after middle-age. My strongest inspiration and moral support is from my daughter, Dr. Melissa Ganus. When my spirits flagged or when my health blockaded my progress, Mel was there, encouraging me to continue.

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Chapter 1: Overview of the Study

Registered nurses, the largest healthcare occupation, numbered about 2.6 million in the United States in 2008 (Bureau of Labor Statistics, 2011). Global concerns have been voiced since the mid-1990s regarding an increasing shortage of nurses, and declining numbers (Grafton, Gillespie, & Henderson, 2101). Although compassion and empathy are key components in a therapeutic relationship with a patient (Van Hook, 2008), display of compassion is not a commodity which can be controlled, trained, and dispensed as needed (Miller, 2007). If nurses are not supported in providing compassionate care, they can be at risk for developing CF (Potter et al., 2010).

Studies have indicated that 80% of these nurses may be at risk for burnout, compassion fatigue (CF), or secondary trauma (Abendroth & Flannery, 2006; Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010). The costs of CF are both financial and psychological (McMullen, 2007; Tehrani, 2007; Van Hook, 2008). Compassion fatigue has been shown to result in loss of quality patient care, increased staff turnover, and attrition (Abendroth, 2011; McMullen, 2007; Sprang, Clark, & Whitt-Woolsey, 2007). The highest rate of attrition from CF occurs during the first two or three years of nursing, leading to an increased average age (Abendroth & Flannery, 2006).

A universally accepted definition of CF has not yet formed (B. Sabo, personal communication, January 18, 2012), despite the numerous studies based on Figley's model (see Figure 1 in chapter 2). Studies based on Figley's 2002 model usually describe CF as a stress disorder based on caring too much for patients, clients, or victims, producing a reduced ability to feel or convey caring support, empathy, or genuine understanding

(Hofmann, 2009). A more complete description of compassion fatigue is provided in chapter 2.

Quantitative studies have indicated certain areas of medical care provision, such as palliative care, have a high risk for CF (Abendroth & Flannery, 2006). The compassion involved in palliative care includes a long-term connection with patients and their families, empathic perspective taking, noticing, listening, and responding (Miller, 2007). This type of extended and increased familiarity with patients and families frequently leads to emotional contagion, and then CF. Recent research has demonstrated psychoneuroimmunological links between negative emotional contagion and biological well-being (Grafton et al., 2010; S. Smith, 2011a). There are, however, a number of gaps in knowledge about CF which cannot be filled using quantitative research (Earle, 2010). One of these gaps, how nurses experience resiliency to CF, is the focus of this study.

Although certain areas of medical care provision may be at high risk for CF, it is not a foregone conclusion that all medical professionals in those areas will develop CF, despite having high empathic ability (Grafton et al., 2010; Sabo, 2011). Looking through a positive psychology lens, and examining the phenomenon of empathic people who have a resiliency to CF will advance understanding about what CF is, and what it is not. Understanding more about resiliency to CF will help in developing resiliency and preventing CF, in addition to lessening risk factors for CF.

Problem Statement

CF is commonly used to describe nurses who feel they can no longer give empathic attention to their patients, friends, or family. The diagnosis may be overused

due to the lack of clear definition (B. Sabo, personal communication, January 18, 2012). Although Figley (2002) provided a model and theory for CF, he did not define compassion or fatigue, or make clear distinctions between compassion and empathy, CF and burnout, or between CF and secondary trauma or vicarious trauma. Research, based primarily on his theory, generally has been quantitative, providing information about risk levels for various traits corresponding to Professional Quality of Life (ProQOL) axes (Hooper, Craig, Janvrin, Wetsel, & Reimels, 2009; Potter et al., 2010; Sabo, 2011). This has led to training programs for CF risk avoidance (Abendroth & Flannery, 2006), but not for strengthening resiliency to CF. The problem this study addresses, therefore, is lack of knowledge about the essence of resiliency to CF may be leading to less effective training programs for healthcare professionals (Harrison & Westwood, 2009).

Nature of the Study

The study advances knowledge about the experience nurses and other healthcare professionals (HCPs) have with CF, and resiliency to it. Seven nurses from various areas of hospital medical practice, each with more than 15 years of experience in nursing, were interviewed. The in-depth semi-structured interviews explored the meanings these people assigned to their experience of CF, and resiliency to it. The results (found in chapter 4) combine interpretative and descriptive phenomenological methods, melding the richness and variability into a collective essence of the experiences. “Phenomenology is the study of essences” (Merleau-Ponty, 1962, p. vii). The proposed sample of nine healthcare professionals was not needed, as data saturation was achieved after seven people had been interviewed, coming from three different hospitals in Seattle. Five nurses worked at

a prominent northwestern American teaching hospital and its affiliated clinics. In addition to field notes and journaling the study, NVivo 10 software was used to categorize and analyze the data. As results developed, they were returned to participants for accuracy checking. I was the only interviewer, transcriber, and analyst, as described in Role of the Researcher in chapter 3. A more detailed description of the entire study context and process appears in chapter 3.

Research Questions

The primary research question was: What is the collective essence of healthcare professionals' experience of resiliency to compassion fatigue? The secondary questions were:

Research Question 2: What distinctions and similarities do healthcare professionals experience between burnout, CF, and vicarious trauma?

Research Question 3: What qualities and characteristics do health care professionals experience as supportive to being empathic and yet resilient to CF?

Purpose of the Study

The purpose of this study was to determine the essence of the phenomenon of resiliency to compassion fatigue from the viewpoint of healthcare professionals (HCPs). This description of the CF resiliency phenomenon provides more clarity with regard to the concepts underlying strength-based training in resiliency to CF.

Conceptual Framework

The current model of CF, based on Figley's (2002) theory, includes many facets: empathic ability, response, and concern; exposure to client; degree of life disruption; and

traumatic memory. Having compassion or empathy, in other words, may lead to CF. Untreated CF can lead to seriously lowered personal and professional functioning (Benoit, Veach, & LeRoy, 2007). Additional theoretical bases for the study are: an interpretative or constructivist view of social reality (Bennett, 1998b; LeCompte & Schensul, 1999a); and the expansion of Bonanno's model of resiliency (Linley & Joseph, 2005). A positive psychology paradigm (Seligman, 2008) underlies the proposed investigation of resiliency, as opposed to investigation of risk factors for CF.

Operational Definitions

Many of the terms basic to this study have had various definitions, making it important to provide the operational definitions used in this study:

Burnout: A condition of mental and physical health decline due to the impact or overload of a person's work, or work environment (Rothschild, 2006).

Collective essence: A distillation of individual points of view regarding a specific phenomenon; fundamental nature of a phenomenon from the viewpoint of several individuals (Merleau-Ponty, 1964).

Cognitive flexibility: The ability to use existing knowledge to create innovative solutions to new problems, using new strategies, reflecting on results, and incorporating feedback (Shamay-Tsoory, Tomer, Berger, & Aharon-Peretz, 2003).

Compassion: A prosocial emotion, being present and feeling for another, with a desire to help, but being aware that one's feelings are separate from the other person's (Austin, Goble, Leier, & Byrne, 2009; Sabo, 2006).

Compassion fatigue: “A combination of physical, emotional, and spiritual depletion” (Lombardo & Eyre, 2011, p. 1) and becoming overwhelmed by repeated and prolonged exposure to clients and patients who are coping with trauma and severe illness or disability (Benoit, Veach, & LeRoy, 2007).

Countertransference: A healthcare professional’s (HCP) reactions to a client or patient which are rooted in the HCP’s past (Rothschild, 2006).

Emotional contagion: The automatic and unconscious transferring of emotions from one person to another, essentially pre-attentive and unconscious (Hatfield, Cacioppo, & Rapson, 1992).

Empathy: Participation, sometimes unconsciously, in another person’s experience, accepting their reality, even though it may differ from our own (Bennett, 1998a; Wispé, 1986).

Empathic response: The physical mirroring of another’s physioemotional state, which happens without thought (Iacoboni, 2007).

Healthcare professionals: Nurses, physicians, and therapists who provide care directly to patients.

Secondary trauma: The stress reaction resulting from emotional engagement with a traumatized or suffering person. (Shindul-Rothschild, 2001; Stewart, 2009).

Sympathy: Imagining how we might feel if we were in the other person’s place, not accepting their separate reality (Bennett, 1998a).

Vicarious trauma: The cumulative physical, emotional, and cognitive reaction, as if experiencing the trauma of clients or patients, with the possibility of developing post-

traumatic stress disorder, without having the actual traumatic experience (Harrison & Westwood, 2009).

Assumptions, Limitations, Scope, and Delimitations

Assumptions

This phenomenological study was based on the following assumptions, in order to establish internal validity, credibility, and integrity:

- CF resiliency among empathic HCPs is a phenomenon of lived experience.
- The phenomenon of CF resiliency can be expressed best by those who have witnessed or experienced it.
- The questions asked in the interviews did not bias the responses, and elicited information about the elements of interest to the study, providing internal validity.
- The participants provided honest responses.
- The results of the analysis of their responses are authentic.
- Multiple realities and experiences are interrelated, and can be researched best by using phenomenology. A single reality of CF resiliency does not exist.

Limitations

Several weaknesses may exist for this phenomenological study, such as bias in self-selection of volunteer participants, as well as reluctance of the participants to discuss fully their own experiences of CF. Due to the small sample used, the full experience of

CF, and of resiliency to it, could not be explored. Different cultures and ethnicities may have significantly different experiences, but as this study did not use theoretical sampling, this additional information is not included.

Scope and Delimitations

The study was limited in scope to nine nurses from three northwestern American hospitals, and is not suitable for generalization. Psychopathological explanations for CF resiliency are not included.

Significance of the Study

The implications for positive social change from this research include the benefits to the healthcare workers' personal health, as well as patient care, of more effective policies at the facility level for in-service CF training and intervention, and for the prospect of a rise of economic productivity in services at the community level.

The study adds to the research concerning CF, as well as resiliency in the nursing profession, filling in gaps in the relevant literature. It will serve as groundwork for additional theory development, enhancing the Figley (2002) model. It will help to make distinctions between burnout, empathic contagion, CF, and vicarious or secondary trauma.

Overview of the Chapters

In summary, this study of healthcare professionals' experience of resiliency to CF increases understanding of CF. This increased understanding of CF can be used to improve training programs curricula for healthcare professionals with regard to CF. In-depth interviews captured the data, checked for accuracy by the participants. The data

was analyzed using the phenomenological methods of Moustakas and van Manen, with assistance from NVivo 10. The analysis was developed into textural and structural descriptions of the phenomenon, resiliency to CF.

The chapters which follow: chapter 2 reviews and discusses research and current literature; chapter 3 presents the proposed methodology for the study. Chapter 4 presents the results of the study and chapter 5 discusses the implications of the results of the study.

Chapter 2: Literature Review

Overview of the Chapter

The purpose of this study was to determine the essence of resiliency to compassion fatigue, using paradigms from empathy, emotional contagion, resiliency, and compassion fatigue (CF) theory. The results and implications of the study add to strength-based approaches for avoiding CF. Previous research studies have investigated the risks for developing CF, using a model developed by Figley (2002), shown in Figure 1. Training programs resulting from Figley's research focused on ways to avoid the risk factors. Although there are many studies regarding the risk factors for CF, there is little discussion of the interrelation of empathy, emotional contagion, and CF.

This literature review presents theories and research regarding empathy, emotional contagion, resiliency, and CF, and discusses the bridges between these factors. The chapter is organized by first discussing theories of empathy, emotional contagion, then CF, and resiliency to CF. The literature review ends with a description of theories of phenomenological research which underlie the methodology chosen for this study.

Search Strategies

Using key words such as empathy and CF, I began finding articles in various databases such as Academic Search Premier. At first I constructed an Excel spreadsheet comparing the bibliographies of leading articles to determine the salient and most frequently cited books and articles. As the number of articles I read grew, I recognized keywords which were most often used, and used these to search for more related literature. These keywords included: burnout, caregiving, emotion regulation, emotional

contagion, empathy, empathic contagion, empathic response, life satisfaction, resilience, secondary trauma, and vicarious trauma. The databases I searched included: Abstracted Business Information (ABI/INFORM) Complete; Academic Search Complete/Premier; Cumulative Index to Nursing and Allied Health Literature (CINAHL) Plus; Education Resources Information Center (ERIC); Health & Medical Complete; Medical Literature Analysis and Retrieval System Online (MEDLINE); American Psychological Association (APA) articles (PsycARTICLES), books (PsycBOOKS), non-peer reviewed scholarly publications, PsycEXTRA, and abstracts (PsycINFO); and sociological professional publications (SocINDEX). I also searched the database of dissertations and theses. In the next sections I discuss the theoretical foundations of empathy, emotional contagion, CF, and resiliency, based on my literature search.

Conceptual Framework

The current model of CF, based on Figley's (2002) theory, includes many facets: empathic ability, response, and concern; exposure to clients; degree of life disruption; and traumatic memory. In Figley's model being empathic is key to developing CF. This literature review therefore presents theories of empathy such as theory of mind (ToM), simulation theory, mirror neuron theory, as well as neuropsychological bases of empathy. Studies of negative emotional contagion are also presented, indicating its impact in development of stress, depression, and risk for CF.

An interpretative or constructivist view of social reality (Bennett, 1998b; LeCompte & Schensul, 1999a) underlies this study. This point of view emphasizes the importance of knowledge based and maintained on social interaction and reinforcement.

In other words, the phenomena of CF and resiliency to CF arise from interaction between an HCP and patients, coworkers, supervisors, and social contacts. The paradigm of positive psychology based on Seligman (2008) then investigates the phenomenon of resiliency to CF, rather than risk factors, and looks at strength-based approaches to resolving problems. Using Bonanno's model of resiliency, and its expansion (Linley & Joseph, 2005) as another conceptual model, I explored the literature.

Empathy, Part of Compassion Fatigue

Many people are attracted to the healthcare profession due to their empathy and compassion. Unfortunately these abilities, if unsupported, may lead to CF (Figley, 1995, 2002; Hofmann, 2009; Sabo, 2011). The diverse definitions for empathy, sympathy, and compassion make understanding difficult about how these traits are involved in CF. There is little research to indicate how a person can be empathic or compassionate and resilient to CF. When I informally asked psychologists at a Vancouver, BC 2011 conference about CF and their thoughts about what led to it, many responded as Hofmann (2009) indicated: "Few healthcare professionals are immune to compassion fatigue" (p. 40).

New research in psychoneuroimmunology and mirror neurons provides evidence of links between empathy and emotional contagion, and between emotional contagion and CF. Until recently, studies of empathy examined the trait as a social interaction and cognitive skill, with little understood about the biopsychological factors involved. The first physiological theory of emotion, posited by Darwin in 1872 (Stone, 2006), led to other theories of emotion, from which current theories of biopsychological bases for

empathy have emerged. Appraisals of empathy deficits in people with psychiatric disorders, or brain lesions, as well as brain imaging studies of healthy volunteers, provide evidence that the empathic response system is a complex network using both hemispheres of the brain, and involving more than the amygdala and orbitofrontal cortex (Shamay-Tsoory, 2011). Before brain imaging was available, most psychologists defined empathy the understanding, even experiencing, of another's reactions, emotions, intentions, based primarily on cognitive processes (Rizzolatti, Fogassi, & Gallese, 2006). The individual empathic response, the knowingness of someone else's emotional state, seems to happen with such rapidity and such certainty (Wolf, Gales, E. Shane, & M. Shane, 2001) however, other processes than cognition must play a part (Rizzolatti et al., 2006).

A broad range of definitions have been proposed for empathy. A recent popular definition of empathy is the ability to see through someone else's eyes, to experience another person's reality (Bennett, 1998a; Jahoda, 2005). Various types of empathy may exist, leading to two major theories underlying research: (a) cognitive empathy based on theory of mind (ToM), and (b) affective empathy, based on mirror neurons and simulation (Langdon, Coltheart, & Ward., 2006). Meta-analysts and theory integrationists propose that numerous areas of the brain are active in empathic response, with linkage and mediation at many points (Oberman & Ramachandran, 2007; Ramachandran, 2011; Seitz, Nickel, & Azari, 2006; Shamay-Tsoory, Tomer, Goldsher, Berger, & Aharon-Peretz, 2004).

Levels of human empathy have a normal distribution, with variance between individuals and within each individual, as seen particularly in people experiencing post-

traumatic stress disorder, or burnout. Lack of empathy has been noted in certain groups of people: people having autism spectrum disorders (Dapretto et al., 2006; Oberman & Ramachandran, 2008; Soderstrom, 2003); Tourette's syndrome, disruptive behavior disorders, various other psychopathic and personality disorders (Soderstrom, 2003); schizophrenia (Langdon et al., 2006; Shamay-Tsoory, Shur, Harari, & Levkovitz, 2007); and in various types of brain lesions (Shamay-Tsoory et al., 2003; Shamay-Tsoory, Tomer, Goldsher, Berger, & Aharon-Peretz, 2004). Why these groups of people might have empathy deficits may be understood when compared to Feshback's definition of empathy: the capacity to: (a) identify another's affective cues; (b) assume the perspective and role of the other; and (c) experience and express emotions, or have affective responsiveness (as paraphrased by Langdon et al., 2006, p. 135). If empathy were totally based on audio or visual cues, one might expect people with visual or auditory impairments to have empathy deficits, but this is not the case (Clark, Wantz, & Brey, 2005; Griffin-Shirley & Nes, 2005). Appendix G explores the research and theory on the evolution and development of empathy.

Examination of empathy as a social experience of shared states of mind, an internal recollection of similar experiences and mental images, gave rise to theory of mind (ToM) and theory-theory (Oberman & Ramachandran, 2007). Both ToM and theory-theory focus on the cognitive components and linkages in the brain. Examples are: the temporal region, for access to knowledge of past experience; the superior temporal sulcus, providing information about observed behavior; and the medial prefrontal cortex,

linking cognitive information to affective areas (Frith, as cited in Seitz, Nickel, J & Azari, 2006).

Theoretical Bases of Empathy

Theory of Mind (ToM). Cognitive and developmental psychologists for decades have studied how humans learn to make analogies between one's own experience and observation of another's experience, infer the other's mental state, and attune one's own behavioral response to the situation (Shamay-Tsoory et al., 2004). Early proponents of ToM were Humphrey in 1976, Premack and Woodruff in 1978, followed by Avenanti, Frith, and Singer. The ToM explanation for empathy is that a person understands another's beliefs and intentions in order to predict, explain, and react to the other's behaviors. This capacity would include basic social perception skills, such as recognizing facial expression, tone of voice and gestures, as well as retaining cognitive flexibility to change one's behavior accordingly (Langdon et al., 2006).

Theory-theory (TT), one type of ToM, has been supported by behavioral observations of children who, by the age of three, seem to have developed a theory of how other people think or will react (Johnson, Filliter, & Murphy, 2009; Zahavi, 2010). Observed children in several studies seemed to test and interact in an exploratory way, rather than accepting a parent's logical definitions, trying to develop a fuller explanation of the objects, including humans, with which they interact (Johnson et al., 2009). TT varies in concept, depending on which theory-theorist speaks (Krueger, 2009). Gordon and Hobbs (2011) indicated that a clear definition was needed for the commonsense theory of the mind-body interaction.

Simulation theory. The empathic understanding of human action, emotion, and internal state, according to the simulation theorists, is based on the combined ability to perceive others as if they were ourselves, and simulate these observations into our own neurological systems (Oberman & Ramachandran, 2007, 2008). Empathy theorists who criticize simulation theory emphasize the difference between perception when one uses one's own experience as reference point, and perception through the other person's point of view. Milton Bennett (1998a), for example, pointed out that sympathy is when one feels emotion for the other person based on one's own experience and a single universal reality. In contrast, empathy embraces the concept of multiple realities, and the other person's perception and experience.

In simulation theory understanding actions, thoughts, and emotions in others has the same biopsychological bases as for processing and executing similar actions, thoughts, and emotions (Oberman & Ramachandran, 2008). Multimodal neurons, initially called emulators, a term from motor control research, function as receptors of efferent copies of motor commands. These emulators, now more commonly called mirror neurons (Rizzolatti & Craighero, 2004), produce simulation of the sensory signals in the same manner as if actual sensorimotor neurons were activated, theoretically aiding in prediction of others' behavior, with appropriate motor response. From an evolutionary point of view, this chain of reaction has been critical for survival (Iacoboni, 2008). "Imitation has a central role in human development and learning of motor, communicative, and social skills" (Iacoboni et al., 1999, p. 2526).

Emulator cells were first discovered by Rizzolatti and his colleagues at the University of Parma in the early 1990s in their research using macaque monkeys to study the sensorimotor system, observing the F5 cortical area associated with hand and mouth movements (Iacoboni, 2008; Iacoboni et al., 1999; Rizzolatti & Craighero, 2004; Rizzolatti, Fogassi, & Gallese, 2006). They called these multimodal cells mirror neurons due to comparable activity during both action and the observation of the action. Because, according to their theory, imitation has some need for acquisition of language, this research group and other simulation theorists used brain scanning technology to examine Broca's area, a primary language center in the human brain. They found confirmation: activated mirror neurons (Rizzolatti et al., 2006).

Barsalou, in 1999, developed a perceptual symbol system (PSS) theory, an expansion on simulation theory (Barsalou, 2010). PSS is based on what Barsalou called conjunctive neurons. These neurons receive efferent copies of input from cognitive sources, such as proprioception and introspection, and from all senses, not just sensorimotor. This input is retained in memory, a data bank on which empathy draws. In the PSS theory, simulators are networks of conjunctive neurons, which activate in clusters for each category, allowing inferences to be made (Oberman & Ramachandran, 2007; Seitz, Nickel, & Azari, 2006). Barsalou's PSS theory, according to some psychologists, provides a "unified theory for how humans interpret and interact with their environment" (Oberman & Ramachandran, 2007, p. 311).

Biopsychological Factors of Empathy

There is no single, universally accepted definition of human empathy, as noted above. It may take stepping into a higher plane of consideration of all recent empathy studies, with integration of significant findings and thought. Researchers, desiring to know which areas of the brain are key components of the empathic response and how these might be linked, have studied people showing empathy deficit due to psychiatric disorders or lesions of specific brain areas. The interwoven historical nature of philosophy and psychology has been abundant in neuropsychological studies of empathy where the search for the physical loci of the empathic response within the human brain has not been unlike the ancient exploration for the location of the soul within the human body (Iacoboni, 2007). Proponents of ToM focus on ways to support their philosophical stance, as do those investigating simulation theory and mirror neurons (Gallese, 2007a, 2007b). As for adoption of an integrated theory of biopsychological factors of human empathy, an expanded model for simulation theory, which gives attention to both cognitive and affective empathy, seems of highest value. Simulation theory, for example, explains how both parity (the meaning of the message being the same for both receiver and sender) and direct comprehension (no previous agreement between receiver and sender) can occur during an empathic interaction (Rizzolatti, Fogassi, & Gallese, 2006).

In reviewing the different studies presented here, researchers may need to pay more attention to meta-analyses, and interlink research of all concepts of empathy—anthropological, developmental, evolutionary, sociological, cognitive, and emotional. The closest to this model is the work being done in Israel by Shamay-Tsoory and

colleagues who have been examining empathy deficits in patients with brain lesions (Shamay-Tsoory, 2011), research by Singer and colleagues in Great Britain (Lamm, Decety, & Singer, 2011), and by Ramachandran and colleagues in the United States (Ramachandran, 2011).

Researchers using brain scanning technologies critique each other's findings, and when differences occur, they speculate about the differing levels of observation possible, depending on what scanning device was used, how it was used, what stimuli were used, and how these stimuli were used (Shamay-Tsoory et al., 2003, 2004; Singer & Frith, 2005; Singer et al., 2006; S. Smith, 2007b). Because of the need to focus the scanning technology on selected areas of the brain where the researchers expect empathic activation, it is difficult to develop a composite picture

Researchers such as Silbert, Gibbons, Cash, Mastaglia, and Thickbroom (2011) have demonstrated the neuroplasticity of human systems, including the possibility for multimodal neuronal systems to be trained for new functions, and adult neurogenesis (Adams, 2001; Curtis, Kam, & Faull, 2011)). As a result, it may be possible, with intense clinical intervention, to develop empathic responses where deficits now exist (Wolf et al., 2001). The mirror neuron system is tuned by values and biases, and is itself plastic (Wolf et al., 2001; Iacoboni, 2008).

Research based on studies of patients with brain lesions. Because of prior identification of areas significant to executive functioning and other cognitive processes, sensorimotor, or affective processing, the first areas considered biopsychological sites for empathy were the ventromedial (VM), dorsolateral (DLC), and orbitofrontal (OFC)

regions of the prefrontal cortex (Shamay-Tsoory et al., 2003). Because the right hemisphere has a significant role in processing emotional and social information, it was assumed it would have a large impact on empathic response, if not be the actual seat of empathy. Various researchers, such as Adolphs, Borod, Damasio, and Shamay-Tsoory, had shown patients with right hemispheric lesions had impairment in recognition and expression of facial expression, affective prosody, mental representation of others' mental states, and other components of ToM, so specific right hemispheric areas were targeted for empathy deficit correlation (Shamay-Tsoory et al., 2004). Shamay-Tsoory and colleagues (2003, 2004) confirmed that although prefrontal structures are important for the empathic response, both hemispheres are involved, perhaps having different functions. The 2003 study by Shamay-Tsoory et al. tested three groups for empathic level: 25 people with acquired, localized lesions in the prefrontal cortex (PFC); 17 people with posterior cortex (PC) lesions; and 19 healthy controls. Prior research, such as Eslinger's 1988 study, indicated patients with prefrontal lesions might have impaired empathy, such as loss of self-awareness, loss of insight, impaired judgment about others, and impaired decision-making based on cognitive and emotional processing (Shamay-Tsoory et al., 2003). Assessments of emotional processing, overall level of intellectual functioning, depression, cognitive empathy and emotional empathy were made, using a battery of psychometric tests adapted for Israeli use.

Shamay-Tsoory and colleagues discovered a significant relationship between empathy levels, cognitive performance, and specific regions of the prefrontal cortex. Damage to the frontal regions of both hemispheres was correlated, in addition to expected

empathy deficits, to impaired abstract interpretation and indirect communication. Lesions in the right PFC led to loss of the ability to mediate empathy and express an appropriate response (Shamay-Tsoory et al., 2003).

Patients with VM damage were the most significantly impaired, having deficits of emotional tone, recognition of expression, and ToM task performance, but no impairment in cognitive flexibility, the ability to solve new problems with existing knowledge (Shamay-Tsoory et al., 2003). Lesions of the OFC region corresponded with losses in mediation of empathy, and emotionally related learning. There were empathic deficits (e.g., lowered ability in cognitive flexibility) in patients having DLC lesions, but not as severe as those with OFC lesions. Differences in the two hemispheres were apparent, but only in comparison of the posterior regions of the PFC—no empathy deficits were observed for patients having lesions in the left PC, but deficits in mediation of empathy and expression of response were seen in patients with right PC lesions (Shamay-Tsoory et al., 2003).

Their conclusion was that the right hemisphere does play an important role in mediation of empathy, as it seems to contain the essential components of systems specialized in emotion processing. All patients with right hemisphere lesions had decreased empathy levels, with the most severely impaired having lesions within the right frontal structures. This coincides with the finding that the right frontal lobe is critical for choosing appropriate emotional response for situations, part of cognitive empathy. The right VM region connects affective information from somatic states with cognitive information in decision making, so damage to this area impairs the convergence zones,

leading to nonintegration of the emotional and cognitive facets of the situation. “A subject with ventromedial damage may understand a social interaction but might fail to comprehend the emotional outcome of this interaction and as a result respond inappropriately to a given situation, thus displaying lack of empathy” (Shamay-Tsoory et al, 2003, p. 333).

As a result of the 2003 research study, Shamay-Tsoory and colleagues suggested that: (a) the posterior right hemisphere processes affective information; (b) the right PFC retrieves past personal events; (c) the DLC is a convergence area, and mediates executive functions such as cognitive flexibility; and (d) the bilateral VM region is the integration point for these processes with input from other brain areas, such as the amygdala and autonomic nervous system (Shamay-Tsoory et al., 2003).

In a subsequent report (2004), the Shamay-Tsoory research group suggested that empathic ability is mediated by distributed circuits. The 2004 study examined three groups: 36 people with frontal lesions (30 men and 6 women); 16 with posterior lesions (10 men and 5 women); and 19 healthy controls (15 men and 4 women), with an average age of 36.5. The people with posterior lesions were separated into groups having damage in either left or right hemisphere, inferior or superior parietal regions. Testing was conducted at least six months after the brain trauma or surgery, at what is considered the chronic phase of recovery (Shamay-Tsoory et al., 2004). As in the earlier study, a battery of tests was administered to the 70 participants, using Hebrew versions when appropriate; assessments were made of cognitive empathy, emotional empathy, neuropsychology, and cognitive flexibility. The lesion area where empathic deficits were most severe was the

orbitomedial right prefrontal cortex. This region connects with areas of striatum, mediodorsal thalamus, and limbic structures, therefore impacting both cognitive and affective empathy, as well as the mediation and integration of empathic processes with input from other parts of the brain (Shamay-Tsoory et al., 2004; Shamay-Tsoory et al., 2007). Empathy deficits were not seen in patients having left PC lesions, but were found for those with left PFC lesions, confirming findings in the earlier study regarding the left and right posterior cortex. Lesions in the right parietal cortex correlated with impairment in being able to identify with others. As before, they found lowered affect processing and social cognition skills in patients having lesions in the right hemisphere. Deficits in episodic retrieval, choice of appropriate emotional response, expression of mood, and tone of mood expressed, occurred for patients with lesions in the right PFC (Shamay-Tsoory et al., 2004).

The wide array of neuropsychological tests led to additional insights about empathy. Significant correlations were seen between cognitive and affective empathy scores for all three groups, but affective empathy was related to only two measures of affect recognition (surprise and sadness). Other emotions, such as happiness or anger, seemed unrelated to affective empathy. Cognitive empathy seemed to rely on executive functions mediated by the dorsolateral PFC. This research group concluded that empathy is a multicomponent mix of cognitive and affective neural mechanisms, and suggested that further study validating these results should be done using empathy assessment in real-life situations (Shamay-Tsoory et al., 2004).

Research using brain scanning technology. In our evolution it has been critical to be “attuned to the intentional relations of others” (Gallese, 2007b, p. 131). One of the earliest indications for a neurophysiologic basis for human empathic response was an electroencephalographic (EEG) study by Gastuat and Bert in 1954, which reported neural activity in the sensorimotor cortex when participants observed others performing specific actions (Oberman, Pineda, & Ramachandran, 2007; Oberman & Ramachandran, 2007). Since then researchers have used brain scanning technology to understand the biopsychological bases for empathy.

In 1992, at the University of Parma, Rizzolatti and colleagues were using EEG to study the premotor cortex associated with hand and mouth movements in macaque monkeys, when they discovered the visuomotor neurons in area F5 firing at the perception of someone else’s action (Iacoboni, 2008; Rizzolatti & Craighero, 2004). By accident, as the story is told, when the macaque under observation saw a researcher reach for a raisin, the EEG monitor indicated neurons firing in the inferior parietal lobule and the F5 area, the same areas activated when the macaque picked up and ate a raisin (Iacoboni, 2008). This observation led to further studies of the multimodal emulator neurons in monkeys, and in humans (Rizzolatti & Criaghero, 2004). In 2000 Wolf and colleagues wrote about the role mirror neurons may have in procedural learning, one of a number of articles at the beginning of this century embracing the concept of mirror neurons within humans (Iacoboni & Dapretto, 2006; Wolf et al., 2001). Functional MRI has been used to reinforce the mirror neuron theory (Iacoboni & Dapretto, 2006). Even

so, there are neuroscientists who do not accept this explanation of mimicry in humans (Hickok, 2009; Rogalsky, Love, Driscoll, Anderson, & Hickok, 2011).

In 1992 neuroscientists Hanna Damasio and Thomas Grabowski, using neuroimaging technology and knowledge of neuroanatomy, investigated the landmark neurologic puzzle presented by Phineas Gage. With engineering assistance from Randall Frank, they digitally reconstructed Gage's brain in three dimensions from images (Damasio, 1994). The history of the Gage case is dramatic. Before his accident, Gage was a healthy, well-balanced, and respected man. An explosion sent an iron bar into Gage's left cheek, piercing the base of his skull, and exiting the top of his cranium to fall 100 feet away. After the accident, he seemed to have no disability in body or mind, but his emotional system was changed radically: he became unreliable, profane, and impulsive (Damasio, 1994). Damasio and colleagues found that "selective damage to the prefrontal cortices . . . [had] compromised his ability to plan for the future, to conduct himself according to the social rules, . . . and to decide on the course of action . . . most advantageous to his survival" (Damasio, 1994, p. 33).

Biopsychologists and other neuroscientists generally use three brain scanning technologies to determine functionality of specific areas of the brain—functional magnetic resonance imaging (fMRI), positron emission tomography (PET), and transcranial magnetic stimulation (TMS)—while the effects of stimuli on emotion, cognition, or behavior, including empathic response, are assessed (Simon-Dack, Rodriguez, & Teder- Säljörvi, 2008). Functional MRI measures increased oxygen flow to activated areas; PET measures accumulation of radioactive 2-deoxy-glucose or

radioactive water in various areas of the brain; and TMS creates a magnetic field which temporarily disrupts activity in targeted areas (Simon-Dack et al., 2008).

These scanning methodologies have been used to show that mirror neurons exist in humans (Rizzolatti & Craighero, 2004). One of the first studies to localize where simulator neurons might reside in human brains was in 1995 when Fadiga, Fogassi, Pavesi, and Rizzolatti used TMS to observe neuronal activity in the premotor cortex while participants watched others' actions (Rizzolatti & Craighero, 2004). They determined Brodmann's area 44/45 (also called Broca's area) corresponded to the macaques' F5 area. The following year Grafton and colleagues (1996) used PET scanning to monitor participants observing pantomimed motions, which activated both parietal areas, more in the right hemisphere than the left (Oberman & Ramachandran, 2007). The parietal region is considered important in being able to identify with others. Decety and colleagues, in 1997, again used PET scan to observe neuronal activity when pantomimed motions were observed, this time finding activity in the left inferior frontal lobe (Broca's area 45), where understanding meaning of others' expression and actions may occur (Decety, 2010; Decety & Ickes, 2009; Oberman & Ramachandran, 2007).

Iacoboni et al. (1999) used fMRI to scan the left frontal operculum (Broca's area 44), the right anterior parietal region, and right parietal operculum while participants observed or executed simple finger movements. Three observation conditions, and three observation-execution conditions, using imitative and nonimitative behaviors, were compared. During all three observation tasks, activity was present in the left frontal operculum, and right anterior parietal region, but not in the right parietal operculum.

When imitative execution occurred, all three areas were activated, leading to the conclusion that Broca's area 44 and the right anterior parietal cortex have imitating neuronal mechanisms (Iacoboni, 2008; Iacoboni et al., 1999).

Subsequent mirror neuron system (MNS) and simulation studies found other brain areas involved, as well confirming earlier results. Wicker, Keysers et al., (2003) used fMRI to investigate which areas were activated when the participant showed disgust from smelling something noxious, or observed the reaction in someone else. They found the anterior insula, and to a lesser amount, the cingulate cortex were implicated. The following year Keysers, Gallese and colleagues used fMRI to study MNS activated locations during the experience or observation of being touched (Gallese, 2007a). They discovered that the secondary, but not primary, somatosensory cortex was activated (Gallese, 2007a, 2007b). The secondary somatosensory cortex (S2) is a functionally defined region adjacent to the primary somatosensory cortex (S1). Research studies have found S2 cells are activated for the stimuli of light touch or tactile attention, visceral sensations, and for pain (Eickhoff, Schleicher, Zilles, & Amunts, 2006).

Avenanti, Buetti, Galati, and Aglioti (2005), interested in the cognitive and neurophysiological correlates of empathy to perceived pain and experienced pain, used single-pulse TMS to assess the results of stimuli applied to hands or feet. Before Avenanti's 2005 study, only three studies (with fMRI) had been used to explore the neurophysiology of human empathy for pain: Decety and colleagues, Singer and colleagues, and Morrison and colleagues. In the Avenanti et al. 2005 study, volunteers sat in front of a video monitor showing: first, a needle inserted into a muscle in the right

hand of an unknown person (a model) while motor-evoked potentials (MEPs) were monitored from the observer's same muscle; second, the same area on the model touched using a Q-tip; then a similar pair of experiments using the model and observer's right feet. A fifth experiment used a TMS pulse on the left motor cortex while the participant watched the video, with a post-scan battery of tests for sensory and affective reactions, as well as personal distress and empathic concern. An important part of the post-scan measurements were visual analog scales which measured what the researchers termed state empathy, whether self-oriented (how much the participant simulated the pain; how much aversion the participant had to the observation), or other-oriented (how intense the other's pain seemed; how much compassion the observer had for the other). The results for the first experiments were negative correlations between amplitude changes in MEPs in the corresponding muscle with McGill Pain Questionnaire (MPQ) sensory ratings for the model, but no significant correlation with affective qualities of the other's pain. During the TMS pulse study, the same correlations were seen (Avenanti et al., 2005). Additional studies by Jackson and Morrison that same year confirmed these results (Decety & Jackson, 2006).

Singer and Frith (2005) used fMRI in studying empathy of pain, looking for physiological correlates for ToM and other types of cognitive empathy. They concluded that there was shared empathic activity in the affective pain network (including the anterior cingulate cortex and anterior insula), but not in the primary somatosensory cortex. This led them to think empathy for pain involved affective, not sensory components of the pain system, and deduced that "empathy is associated with activity in

regions concerned with the unpleasantness of the pain rather than with its precise sensorimotor qualities” (Singer & Frith, 2005, p. 845). In this study, while the participant’s brain was scanned, the person watched a video display (a symbolic arrow) whenever the person’s partner, who sat next to the observer, received a painful stimulus. The study confirmed the 1981 findings by Roland, who claimed somatotopically organized sensorimotor activity could be elicited by simply paying attention to a body part about to be touched. Therefore mental attitude was one of the likely factors of empathy (Singer & Frith, 2005).

Singer and colleagues in Great Britain also were interested in learning how the brain’s empathic response is modulated by the affective link between individuals, or influenced by cultural bases or learned preferences (Lamm, Decety, & Singer, 2011). In one study, 32 participants each played an economic game, Prisoner’s Dilemma, while two confederates in a separate room played either fairly or unfairly against them (Singer et al., 2006). Afterward, each participant’s brain activity was scanned using fMRI, with the two confederates sitting on each side of the scanner. While the participant watched, the confederates received what the participant thought was low or high levels of electronically delivered pain. Each session had ten trials for each of six conditions (pain or no pain, in context with delivery to self, the person who played fairly, or the one who played unfairly). After the scanning session, each participant completed a Davis empathy scale, rating the intensity of pain to self and to others, the likability of each of the confederates, and the participant’s desire for revenge (Singer et al., 2006).

For both male and female participants, when a person they considered a fair player was “shocked,” there was activity in the frontoinsula and anterior cingulate cortices. This was considered an empathic response to perception of the other player’s pain. When the player was considered unfair, this response This effect was accompanied by increased activity in the reward-related areas of the brain, showing significant correlation with the observer’s expressed desire for revenge. These same areas of the brain were also activated when the participant experienced pain, not simply observed it (Singer et al., 2006).

Rizzolatti, Fogassi, and Gallese (2006) summarized their own and others research, beginning with a description of the original accidental discovery of the MNS in the macaque monkey, leading to their own research on biopsychological bases for empathy in humans. Using PET scans while participants were shown different hand movements and grips, the researcher discovered significant results in three cortical areas: the superior temporal sulcus (STS), known to contain neuron responders which activate when a person observes others’ moving various parts of the body; the inferior parietal lobule (IPL), which corresponds to the monkey’s IPL; and the inferior frontal gyrus (IFG), which corresponds to the monkey’s ventral premotor cortex, including the F5 area. Their research in human empathy continues to explore how mirror neurons play a role in understanding others’ actions rather than just registering it visually or auditorily (Rizzolatti et al., 2006).

Seitz, Nickel, and Azari (2006) performed a meta-analysis of 80 studies reporting neural correlates of human empathy, and concluded there are six spatially distinct

activation clusters, specifically active during empathic response, in the medial part of the frontal lobe, dorsal to the intercommissural plane, the most dorsal cluster coincident with the left supplementary motor area. The specific location of the six clusters, and the apparent function of each, are:

- Left supplementary motor area: attention to action.
 - Right presupplementary motor area: self-referencing of action.
 - Left superior dorsomedial area: attention to sensation.
 - Left mid-dorsomedial area: recognition of alternative actions.
 - Right mid-dorsomedial area: valuation of thought.
 - Left anterior dorsomedial area: valuation of types of observed behaviors
- (Seitz et al., 2006).

In summary, Seitz and colleagues suggested there are a number of cognitive empathy activation areas outside the superior frontal or cingulate gyrus, in other cortical areas of frontal, parietal, and temporal lobes, as well as the amygdala. The model of empathy they used seems limited to ToM and other cognitive empathic functions, such as introspection, understanding others' behavior, and valuation of types of observed behaviors.

Empathic Response and Emotional Contagion

Emotional Contagion Compared to Empathic Response

Empathy consists of three parts: emotional empathy (also known as emotional contagion), cognitive empathy (ToM and TT explanations of our ability to take another's perspective), and self-distinction from the other (Decety & Jackson, 2004; Hatfield,

Rapson, & Le, 2009; Shamay-Tsoory, 2011). If cognitive empathy and the ability to be self-aware are absent or lowered, negative emotional contagion can lead to distress, and develop into CF and the inability to help (Fabes, Eisenberg, & Eisenbud, 1993). One definition of empathic response, based on simulation theory, is the physical mirroring of another's physioemotional state, which happens without thought (Iacoboni, 2007). Understanding feelings, emotions, and physical reactions within empathy requires awareness of the neural and endocrine systems needed for both detection and response to bodily states (Carter, Harris, & Porges, 2009; Porges, 2007). Empathy, emotional contagion, and CF therefore can be viewed in terms of adaptive neuroendocrine and autonomic processes.

Emotional contagion theory concerns the automatic and unconscious transferring of emotions from one person to another. This includes subjective feelings, expressions, emotional appraisal as well as patterns of physiological processes. Social information processing involves embodiment (Niedenthal, Barsalou, Winkielman, Krauth-Gruber, & Ric, 2005). The underlying mechanism of primitive emotional contagion is essentially pre-attentive and unconscious (Hatfield, Cacioppo, & Rapson, 1992, 1994; Rothschild, 2006). The somatic aspects of emotional contagion may become part of CF with the psychoneuroimmunological implications of stress and emotional overload.

Psychoneuroimmunological Factors of Emotional Contagion

Hatfield, Cacioppo, and Rapson (1992, 1994) were early researchers into emotional contagion and its components, and defined it as the tendency to mimic and synchronize expressions, postures, gestures, and movements with someone else, and

“consequently, to converge emotionally” (Hatfield et al., 1992, p. 154). This can happen through telecommunication (e.g. chat-rooms), as well as in person, and can occur within a group, where individuals pick up the mood of others (Bartel & Saavedra, 2000). The parts of the nervous system which activate synchrony and mimicry are involved in emotional contagion, giving feedback to the receiver of the situation, as well as helping to define self-perception within the situation (Hatfield et al., 1994). Research suggests that the MNS is implicated in emotional contagion, as well as empathic response (Iacoboni, 2008).

Explicit emotional contagion can occur as a result of someone’s intention of persuasion, or to alleviate negative feelings, as well as intention to influence (Kelly & Barsade, 2001). Implicit emotional contagion, on the other hand, is less conscious, and relies primarily on nonverbal communication (Hatfield et al., 1992, 1994; Rothschild, 2006). Individual differences exist in response to positive and negative stimuli. In most cases, however, negative events tend to activate quicker and more intense emotional, behavioral, and cognitive responses, compared with neutral or positive events, leading to negative neural responses typical of negative emotions (Barsade, 2002). An interesting study by Hietanen (1998) studied facial electromyographic (EMG) responses to angry voices compared with contented voices, and found that anger elicited behavioral withdrawal responses, and increased EMG activity in the subjects’ brow region. This supported the theory of emotional contagion occurring just from hearing emotion expressed vocally by another human. In any case, emotional contagion is more likely to

occur when attention is allocated to the other person or group (Barsade, 2002; Hatfield et al., 1992, 1994).

Individual Differences of Emotional Contagion

Cultural as well as individual differences exist in people's vulnerability to emotional contagion (Rothschild, 2006). Western cultures based on individuality generally allow greater freedom in overt expression of negative emotions, compared to community-based Asian cultures (Matsumoto & Kupperbusch, 2001). In addition, women from Western cultures have more emotional expression freedom. Women generally score higher on empathy, social sensitivity, and emotional recognition tests than men (Chakrabarti, Bullmore, & Baron-Cohen, 2006; Schulte-Rüther, Markowitsch, Shah, Fink, & Piefke, 2008).

The Schulte-Rüther et al. (2008) study used fMRI to investigate gender differences in an emotion attribution task. During cognitive processing related to self, women activated more neural activity in the left temporoparietal junction than men. The data suggested that women elicited higher mirror neuron activity than men, which may underlie increased female vulnerability to emotional contagion. Although men and women's outward indication of experiencing negative emotions may vary widely, it is possible that the internal experience of emotion is much more similar between genders, and has similar amplitudes of physiological and psychological arousal (Rothschild, 2006). Supporting this view, the Lamm, Decety, and Singer (2011) meta-analysis found no consistent gender differences across all 32 studies which used fMRI to investigate empathic pain.

Conscious cognitive processes also can cause individual differences, due to varying degrees of openness to receiving or being aware of emotions. Hatfield and colleagues (1994) delineated six factors of individual susceptibility to emotional contagion:

1. The observer gives attention to the person(s) experiencing emotion.
2. The observer feels some type of connection with the other person or group.
3. The observer is able to mimic and simulate frequently during interpersonal interactions.
4. The observer has ability in reading facial, nonverbal and verbal expressions.
5. The observer has ability to detect his or her own internal states.
6. The observer is particularly reactive to his or her own emotions and feelings.

Personality (e.g. being a sensitizer or a repressor), psychological stress loads, as well as physiological differences (e.g. having less mirror neurons than normal) can affect vulnerability to emotional contagion (Hatfield, 1994).

Psychological and Neurophysiological Bases of Emotional Contagion

Psychological bases. A recent Swedish study (Lundqvist, 2008) of the influences of personality on susceptibility to emotional contagion, found that reward dependence correlated with all basic emotional components of the emotional contagion scale: anger, fear, sadness, happiness and love. Harm avoidance correlated significantly with susceptibility to anger and fear. Novelty seeking and persistence, on the other hand, had no correlation to emotional contagion. Self-directedness correlated with susceptibility to positive emotions, such as happiness and love. Previous studies had shown that

cooperativeness and self-transcendence are linked with reward dependence. In the Lundqvist 2008 study, however, cooperativeness had no significant correlation with vulnerability to anger or love. Self-transcendence was negatively correlated with sadness contagion. The part of personality which experiences and expresses emotions had high correlation with level of susceptibility to emotional contagion. The regulatory characteristics of the individual's emotional system were part of vulnerability to another's emotions (Lundqvist, 2008). It is likely that genetic heritage and early experience predispose a person for emotional contagion vulnerability (Hatfield et al., 1994; Rothschild, 2006).

Neurophysiological bases of emotional contagion. Results of studies of the neurophysiological processes underlying personality and emotion have reinforced results from personality studies of emotional contagion susceptibility. The processes necessary for survival and basic to social behavior are based on the capacity to react to stressors, and yet maintain visceral homeostatic states needed for life processes (Carter et al., 2009). The neural circuits regulating social behaviors, including empathy, may therefore overlap with those regulating visceral homeostasis. "The autonomic nervous system is fundamental to affective experience, emotional expression, facial gestures, vocal communication, and contingent social behavior" (Carter et al., 2009, p. 170).

Studies of animal brains and lesion studies of human brains have found that social communication is determined by the cortical regulation of medullary nuclei using corticobulbar pathways (Shamay-Tsoory, 2011). Self-reflection and autobiographical memory, part of cognitive empathy, involve the ventromedial prefrontal cortex (VPC),

the TPJ, and the medial temporal lobe (MTL) (Shamay-Tsoory, 2011). In the evolution of humans a link developed between the neural regulation of facial muscles and a new vagus nerve which had faster transmission than the unmyelinated vagus nerves of other primates (Porges, 2007). This connection led to the ability to calm agitated states, dampen sympathetic nervous system (SNS) reactivity, as well as the hypothalamic-pituitary-adrenal (HPA) axis, allowing sociability to overcome fear, and the ability to develop gut reaction and empathic responses, including emotional contagion.

Wicker, Keysers, Plailly, Royet, Gallese, and Rizzolatti (2003) conducted an fMRI study of disgust and emotional contagion. The participants inhaled odorants, and later viewed video clips of facially expressed disgust. Both types of stimulant, primary and secondary, activated the same sites in the anterior insula and, to a lesser degree, in the anterior cingulate cortex. Both areas are high in mirror neurons (Iacoboni, 2008). Less is known about the empathic response to sound or emotional contagion from a sound stimulus, as the majority of empathy and emotional contagion research has been based on visual cues (Carter et al., 2009).

Harm avoidance correlates with variations in the behavior inhibition system which is related to serotonergic activity. Reward dependence correlates with variation in the behavior maintenance system, noradrenergic activity in areas of the body affected by norepinephrine (Lundqvist, 2008). Using the Temperament and Character Inventory (TCI), Lundqvist found the enzyme, monoamine oxidase A functioned in breaking down serotonin and noradrenaline, and influenced ventromedial prefrontal cortex-amygdala connectivity related to both harm avoidance and reward dependence, although not to

novelty seeking. Self-directedness correlated with activity in the medial prefrontal cortex (Cloninger, Svrakic, & Przybeck, 2006). These same areas of emotion processing and regulating were related to empathy deficits, social emotional disorders, as well as imitative behavior (Iacoboni, 2008), an essential component of emotional contagion (Rothschild, 2006).

The neuropeptides oxytocin and vasopressin also play an important role in empathy and emotional contagion (Carter et al., 2009). Domes, Heinrichs, Glascher, Buchel, Braus, and Herpetz (2007) found that oxytocin attenuates amygdala responses to facial expression, regardless of valence. Oxytocin also appeared to improve ability to infer affective states in others (Domes, Heinrichs, Michel, Berger, & Herpetz, 2007). Another study found oxytocin blood levels correlated with reward dependence (Bell, Nicholson, Mulder, Luty, & Joyce, 2006).

Development of Emotional Contagion in the Human Life Span

Emotional contagion occurs in all mammals, including rodents, as well as other types of animals such as birds (Hatfield et al., 1992). In humans it may take place in utero. It certainly is evident in the first days of an infant's life (Iacoboni, 2009; McDonald & Messinger (n.d.), Shamay-Tsoory, 2011). An example is the hospital nursery where infants respond to each other's crying with their own wails (de Waal, 2008). It is possible that in human development, beginning in the fetal stage, there is a separation between emotional and cognitive empathy, resulting in some people having one type of empathy without the other, as in autism spectrum disorders and borderline personality disorder (Shamay-Tsoory, 2011). An individual's capacity for empathy and

emotional contagion is a dynamic characteristic which exists on a continuum.

Fortunately, a number of research studies have indicated that both cognitive and affective empathy can be developed later in life (Rothschild, 2006). For example, a person can be conditioned to respond with an appropriate emotion to a specific stimulus through training in awareness and observation of people with whom he or she is interacting (Rothschild, 2006). It is possible, therefore, that emotional contagion can also be developed or modified throughout life.

The converging evidence from neuroimaging and lesion studies of humans indicates emotion recognition and emotional contagion are based on a neural network including the IFG and IPL, whereas cognitive empathy involves the ventromedial prefrontal cortex (VPC), temporoparietal junction (TPJ), and the medial temporal lobe (MTL) (Shamay-Tsoory, 2011). A recent study (Hurlemann et al., 2010) which administered nasal oxytocin found participants increased emotional, but not cognitive empathy. This reinforced the theory of separate neural processes for cognitive and emotional empathy, or emotional contagion, and therefore separate developmental tracks.

Interactive synchrony and mimicry. Interactive mimicry and synchrony were important possibly in human evolution, assisting in facilitation of social activity through feelings of unity and understanding (Levenson & Ruef, 1997). Spectator-participants altered their breathing patterns and muscular contractions unconsciously to mimic individual athletes they observed in competition (Paccalin & Jeannerod, 2000). When a person sees someone wince from touching a hot surface, that person usually responds with a similar wince (Hodges & Wegner, 1997).

Preston and de Waal (2002) proposed a perception-action hypothesis: perception of another's behavior automatically activated one's own representations for the behavior, confirmed by mirror neuron research (Iacoboni, 2009). Gallese (2007), a simulation theorist, suggested that processing social information involves activating neural states during observation that match observer remembered experiences. It is likely that the MNS provides the basis for motor empathy leading to cognitive empathy, imitation, and emotional contagion (Shamay-Tsoory, 2011). The MNS has been identified in the IFG, Brodmann's Area, and the IPL (Iacoboni, 2009; Shamay-Tsoory, 2011).

Automatic mimicry of facial expression has been observed in infants and young children in numerous research studies (Hatfield, Rapson, & Le, 2009). As children develop and learn to interact socially in conversation, they automatically and continuously mimic and synchronize their own movements with people close to them, with such subtle moment-to-moment changes that no observable change in facial expression occur, although the changes can be detected using fMRI and EMG

(Lundqvist, 1995; Wild, Erb, Eyb, Bartels, & Grodd, 2003). Although important in human development, interactive synchrony and mimicry can lead also to negative effects.

Detrimental effects of emotional contagion. Emotional contagion, as part of empathy, facilitates social interaction. As part of CF, however, emotional contagion can make a person vulnerable to absorbing negative emotions (e.g. fear, anger, sadness) and stress. Negative emotion bombardment over a period of time can lead to the somatic reactions to stress. In a crowd, negative emotional contagion may lead to extreme behaviors, such as mass hysteria (Rothschild, 2006). Mass hysteria has been defined as numerous people linked by some form of communicative interconnection, who take on the same aversive emotional or psychosomatic symptoms and behaviors (Hatfield et al., 1994). Even a mild form of chronic emotional contagion can have adverse consequences for an individual. Howes, Hokanson, and Lowenstein (1985) found that college students with mildly depressed roommates were more likely to become depressed than those living with roommates without depression.

Therapists and medical practitioners who are exposed repeatedly to emotionally traumatized individuals are in danger of developing adverse emotional contagion affects in forming an empathic bond with patients and clients (Rothschild, 2006). One study which examined mental health practitioners who worked with populations of trauma victims found that 14% of the practitioners developed symptoms of post-traumatic stress disorder (PTSD) (Shindul-Rothschild, 2001). When a person develops PTSD through another person who experienced the trauma, this is termed vicarious or secondary trauma.

Another potential risk can occur when clients with high vulnerability of emotional contagion “catch” therapists’ burnout, stress, or depression, adding to the clients’ own emotional load (Linehan, Cochran, Mar, Levensky, & Comtois, 2000). Fortunately, if a person’s cognitive empathic ability is strong, this can be used, with training, to inhibit emotional contagion (Rothschild, 2006).

Psychoneuroimmunologic implications. More research is needed which directly links emotional contagion with the psychoneuroimmunological system, although studies have been done concerning the interactions between the psychoneurological system and various types of empathy (Avenanti et al., 2005; Carr, Iacoboni, Dubeau, Mazziotta, & Lenzi, 2003; Carter et al., 2009). Studies have also been done on the effects of CF on overall health (Gordon & Hobbs, 2011). Figley’s (2002) model of CF (see Figure 1), animal single-cell studies of empathy, as well as human lesion studies (Decety, 2011; Lamm, Decety, & Singer, 2011; Shamay-Tsoory, 2011) have begun to build a bridge of understanding. Figley’s (2002) model of compassion stress and fatigue begins with empathic ability, which is affected by amount of exposure and empathic concern for the client or patient, leading to an empathic response. This could be the point at which emotional contagion may occur. If the empathic responder finds satisfaction with work and is able to disengage from emotional contagion, (i.e., has cognitive and self-other empathy intact), the process ends there (Hatfield, Rapson, & Le, 2009). Otherwise, residual compassion stress builds up. As traumatic memories are evoked and the exposure to the client or environment is prolonged, CF may develop. The risk of CF is increased if there are major life disruptions (Hatfield et al., 2009).

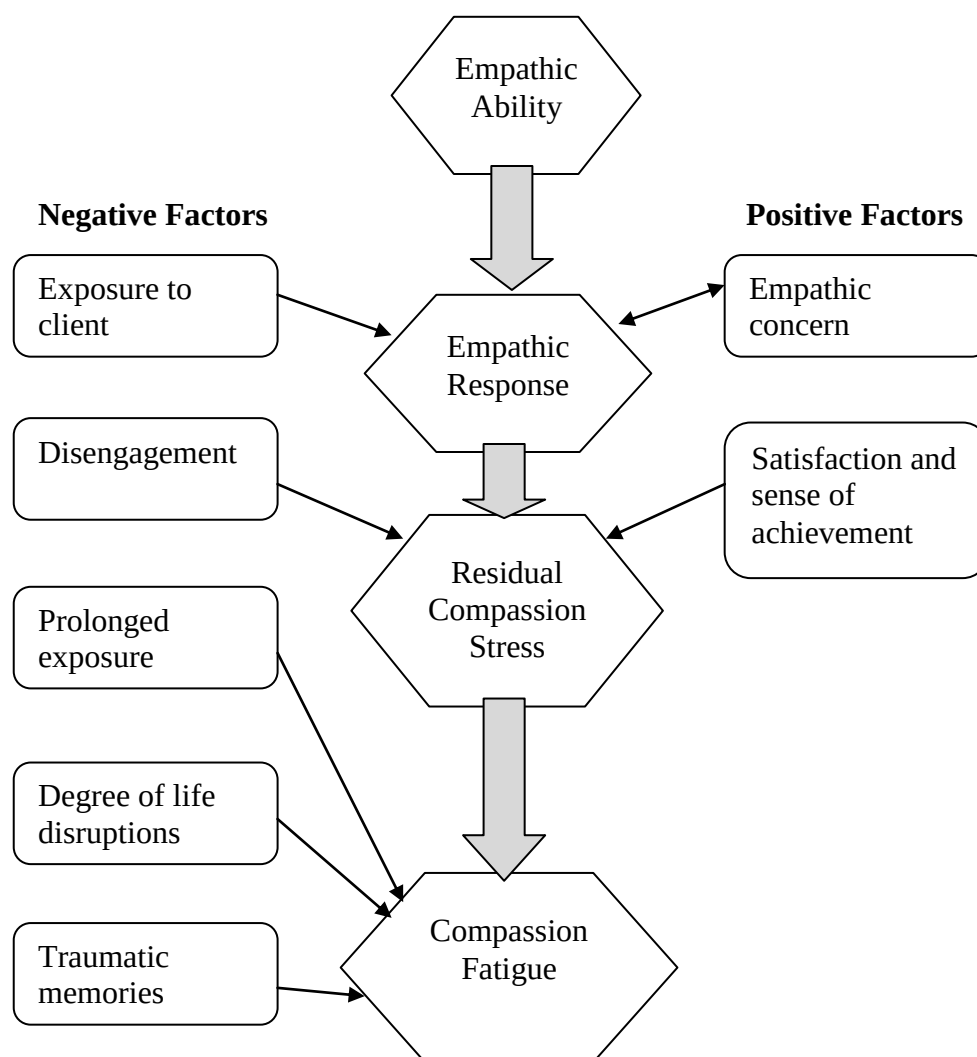


Figure 1. Figley's 2002 Compassion Stress and Fatigue Model.

[Adapted from C. Figley, "Compassion Fatigue: Psychotherapists' Chronic Lack of Self Care," p. 1437, in *Journal of Clinical Psychology*, 58(11).] Permission granted for adaptation.

Research has established that the HPA axis is involved in the neurobiology of mood disorders and functional psychopathologies such as anxiety disorders,

posttraumatic stress disorder (suggesting secondary and vicarious traumatic stress disorder due to emotional contagion are included), burnout (and possibly CF), and depression (Fortes et al., 2003; Irwin & Cole, 2007; Miller, Chen, & Zhou., 2007). The amygdala is one part of the brain which underlies empathy, allows for emotional convergence with another being, and therefore the development of emotional contagion (Rothschild, 2006; Shamay-Tsoory, 2010). A meta-analysis (Lamm, Decety, & Singer, 2011) of nine independent fMRI studies of empathic pain indicated that the core network, consisting of the bilateral anterior insular cortex and medial/anterior cingulate cortex, was associated with empathic responses to other's pain. This network overlaps with the areas activated by actual pain. Cognitive empathy occurred in areas of the brain associated with inference and mental representation about another's emotional state: the precuneus, VM, superior temporal cortex, and temporoparietal junction (Lamm et al., 2011). Shamay-Tsoory (2011) also reported, from lesion studies she and colleagues conducted in Israel, that two distinct areas exist for cognitive empathy and emotional empathy (emotional contagion): "The inferior frontal gyrus and inferior parietal lobule are necessary for emotion recognition and emotional contagion. On the other hand, the involvement of the ventromedial prefrontal cortex, temporoparietal junction, and the medial temporal lobe" are necessary for cognitive empathy (Shamay-Tsoory, 2011, p. 18). Although there may be two distinct and independent neural bases for empathy, empathic responses probably elicit activation to some degree in both areas.

Stress, such as develops with CF and perhaps with negative emotional contagion, elevates the concentration of hormones, such as glucocorticoids and catecholamines

(epinephrine or norepinephrine), as well as altering the production of cytokins, lowering defenses against infections (Rabin, 2007). In people with autoimmune disorders, an exacerbation can be evoked by stress, probably due to alteration of the balance between CD4 Th1 and CD4 Th2 cells (T-cell helpers), increasing the reactivity of the Th1 cells (Rabin, 2007).

Stress also affects the endocrine system. The HPA axis is a major part of the neuroendocrine system. There are a complex set of interactions between the paraventricular nucleus (PVN) of the hypothalamus, the anterior lobe of the pituitary gland, and the adrenal glands (Kaye & Lightman, 2007). These interactions regulate body processes including the immune system—energy storage and use, mood and emotions, digestion, and sexuality. The HPA axis is a primary interaction mechanism for glands, hormones, and parts of the midbrain which influence the general adaptation syndrome (GAS), originally described by Selye (as cited in Kaye & Lightman, 2007).

Neuroendocrine neurons in the PVN produce vasopressin and corticotrophin-releasing hormone (CRH) peptides. These peptides regulate the anterior lobe of the pituitary gland, stimulating the secretion of adrenocorticotrophic hormone (ACTH). ACTH then causes the adrenal cortices to produce glucocorticoid hormones (cortisol in humans). The glucocorticoid hormones then affect the PVN and pituitary to inhibit CRH and ACTH production (Kaye & Lightman, 2007). The transport systems include both neural and blood pathways. For example, CRH is transported through blood, and vasopressin, the antidiuretic hormone, through the axonal network (Kaye & Lightman, 2007; Miller et al., 2007). Extremely important to the understanding of the HPA axis is the nature of these

feedback loops, which can be thrown off balance by chronic stress such as negative emotional contagion.

Depression, which can also be caused by chronic negative emotional contagion, creates dysregulation of the immune system and activation of the HPA axis (Irwin & Cole, 2007; Miller, 2007; Miller et al., 2007). In one study (Miller et al., 2007) uncontrollable stressors that threatened physical integrity and involved trauma elicited a high, flat diurnal profile of cortisol secretion. Patients having various levels of clinical depression have disruption of the adrenal axis, the autonomic nervous system, and overall immunity (Irwin & Cole, 2007). Studies have contradictory results regarding the complex interaction between depression and the immune system, but overall an impairment of cellular immune response results, particularly in the elderly (Fortes et al., 2003).

The autonomic nervous system influences the immune system through sympathetic fibers which innervate the lymphoid organs, and production of catecholamines in the adrenal medulla within the HPA axis (Fortes et al., 2003; Irwin & Cole, 2007). When the HPA axis is disrupted by stress or depression, excess cortisol is produced and circulated, leading to cytokine (immune messenger cell) development (Irwin & Cole, 2007). Another consequence of depression, seen in studies of premenopausal women taking antidepressant medications (not selective serotonin reuptake inhibitors), is bone-thinning (NIMH, 2007). Blood and urine samples taken every hour for a full day indicated that these depressed women had imbalances in the immune system, including proinflammatory substances such as IL-6, known to promote

bone loss. The NIMH (2007) concluded that excess adrenalin produced in depressed patients led to their immune system imbalances.

As these studies have shown, emotional contagion, which may be a significant part of CF, can have serious negative results over time. There are, however, some counterarguments as well as limitations of the studies of emotional contagion, presented later in this chapter.

Compassion Fatigue

Compassion fatigue has been compared to burnout, empathic contagion, secondary stress or trauma disorder, countertransference, and secondary victimization (Austin, Goble, Leier, & Byrne, 2009). Each of these disorders, however, has different characteristics, and can be based on different types of situational problems (Aycock & Boyle, 2009). The definition of compassion is not universal, and is frequently merged or confused with empathy. For the purpose of this study, compassion refers to a pro-social emotion, potentially beginning development in infancy (Stone, 2006). Compassion, in contrast to the various forms of empathy, has two components: (a) the recognition of suffering in another person or object, living or inanimate; and (b) the motivation to alleviate that suffering. Just as empathy is a neurological, affective, and cognitive complex reaction within a person, CF is an equally complex psychological, physiological, and a cultural phenomenon (Austin et al, 2009; Johnson, 2008). Essentially CF is the reduced ability to feel or convey caring support, empathy, or genuine understanding (Hofmann, 2009). Some of the symptoms of CF, according to the Compassion Fatigue Awareness Project (2012) are: mental and physical fatigue; not caring about others,

including family; repressed or labile emotions; isolation; compulsive behaviors, including substance abuse to mask feeling; poor self-care; poor sleep patterns; depression; apathy; preoccupation; lowered immunosystem and chronic physiological ailments; difficulty concentrating; and being in denial about problems.

Compassion and empathy are key components in a therapeutic relationship with a patient, and yet, if not supported, CF can result (Figley, 2002; McMullen, 2007). The costs of CF are both financial and psychological (Austin et al., 2009; Tehrani, 2007; Van Hook, 2008). Palliative care, long-term rehabilitation, cancer care, and various other health providing areas have had increasingly large numbers of people suffering from CF (Abendroth & Flannery, 2006), leading to loss of quality care, and attrition in nurses and other health providers (McMullen, 2007; Sprang, Clark, & Whitt-Woolsey, 2007).

Origins of the Concept of Compassion Fatigue

One of the earliest uses of the phrase, compassion fatigue, was in reference to the lack of interest in the homeless problem in 1995 (Link et al., 1995). Joinson (1992) noted some emergency room nurses lost the ability to nurture. She referred to the condition as compassion fatigue. Figley (1995) used the term in connection with secondary traumatic stress disorder, and later (2002) developed the theory and model of CF which is widely accepted today by healthcare professionals (see Figure 1). Figley's 2002 case study presented a theoretical model (see Figure 1) for how CF occurs: Exposure to certain clients and situations, combined with empathic concern leads to an empathic response, a physical reaction in the neuropsychological system. As part of coping, disengagement may occur, and loss of satisfaction in the interaction with the client or patient, leading to

residual compassion stress. Prolonged exposure to the stressful situation, combined with traumatic memories, and the degree of life disruptions, then leads to CF.

One of the limitations to Figley's model, however, is that it implies causation when none has been clearly indicated. Sabo (personal communication, January 18, 2012) considered the theory also in need of clear definitions for each of the concepts—empathy, compassion, and fatigue.

Several theories and paradigms underlie the present study: (a) the model of CF proposed by Figley (2002), the foundation for most current definitions and studies of CF; (b) positive health, as described by Seligman (2008); and (c) an expansion of Bonanno's 2004 model of resiliency proposed by Roisman (2005).

Unlike burnout, which often can be alleviated by vacation, or job change, CF is a debilitating condition of over-identification or preoccupation with the suffering of others, and is not easily healed (Stewart, 2009). Multiple symptoms occur with CF, as described by HCPs: loss of the ability to connect and nurture, fatigue, depression, anger, lowered self-efficacy, apathy, and detachment (Boyle, 2011). Somatic problems also occur, such as headaches, gastrointestinal difficulties, and insomnia. As stress is prolonged, the symptoms worsen gradually for those HCPs who do not recognize the early warning signs and take care of themselves (Compassion Fatigue Awareness Project, 2012).

Risk Factors

Factors related to working environment, demographics and health of the HCP, as well as duration and type of interaction with patients and clients may be components in the development of CF (Abendroth, 2011). People who are low in empathic ability,

including some people with an autistic spectrum disorder, are unlikely to develop CF (Dapretto et al., 2006). On the other hand, people most at risk are those who are overly empathic, without empathy mediation skills to differentiate between self and other, leading to blurred boundaries (Abendroth & Flannery, 2006). Risk is increased in situations of negative emotional contagion.

Personality factors. Many HCPs begin their careers with an idealistic attitude, even at risk to themselves (Austin et al., 2009; Johnson, 2008). Due to both personal and environmental factors over time, this desire to help others too often has been replaced by “efficiency, coping and being knowledgeable” (Johnson, 2008, p. 19). Research has shown relationships between risk for CF, inadequate self-esteem, and lowered career satisfaction (Alkema et al., 2008; Aycock & Boyle, 2009; Harrison & Westwood, 2009). Other individual factors are: habitual somatization of what others feel (empathic response); lack of self-awareness, and inadequate habits of self-care (Abendroth & Flannery, 2006; Aycock & Boyle, 2009; Harrison & Westwood, 2009); unhealthy cognitive schema developed from personal experience (Tehrani, 2007); and self-expectations from social learning. A belief in the value of self-sacrifice due to cultural conditioning can lead to overcommitment toward work and patients (Aycock & Boyle, 2009; Bride & Figley, 2007; Reid, 2006). As an example of bad self-care habits, burnout, if left unchecked, can lead to CF (Abendroth & Flannery, 2006).

Some attachment styles may heighten risk, particularly people who have ill-defined boundaries. This can be the basis of emotional contagion or unhealthy empathic relationships with patients (Abendroth & Flannery, 2006; Mikulincer et al., 2005). Future

research may show that people who are resistant to developing CF generally have a secure attachment style. Chronic personal distress, consistently correlated with attachment anxiety, may be one aspect of affective empathy (Mikulincer et al., 2005), leading to risk of CF.

Low self-perception of emotional intelligence (PEI) is another risk factor for CF (Ramos et al., 2007). PEI includes a person's self-perception of ability to cope with acute and chronic stress. In 1995, Salovey, Mayer, Goldman, Turvey, and Palfai developed a model of PEI, with three major perceived abilities: (a) attention to moods and emotions of self and others; (b) distinction between feelings; and (c) self-regulation of emotions and moods (Ramos et al., 2007). High PEI is positively related with lower incidence of depression, higher satisfaction with life and career, and adequate resolution of emotional sociocognitive dissonance (Ramos et al., 2007).

Human service workers who have high empathic concern, plus the ability to avoid emotional contagion, are better able to communicate compassionately (Miller, 2007). Unfortunately numerous people attracted to the career of palliative caregiving have high levels of empathic concern (feeling "for" the patient), without the ability to block emotional contagion (feeling "with" the patient), which leads to high incidence of CF (Bride & Figley, 2007; Miller, 2007). Abendroth and Flannery (2006) studied risk levels for CF in people working in hospice organizations. Nurses ($N=216$) from 22 hospices in Florida responded. The key risk factors exposed were trauma within the HCP's life, anxiety, life demands at work and home, and excessive empathy. The other risk factor, continually present, was lack of support.

Situational and occupational factors. Most studies of CF have focused on the complex combination of psychological factors leading to the stress disorder, rather than examining closely the context and work environment. For example, Tehrani (2007) proposed that a pre-conscious set of assumptions and accompanying attitudes occurred due to the health professionals own experience or understanding of trauma and post-traumatic stress disorder.

Work environment and lack of social support, however, can increase risk of CF (Austin et al., 2009; Johnson, 2008). Personal accumulation of stress can be a major factor leading to CF whether the stress occurs at home or in the workplace from issues with management and bureaucracy (Johnson, 2008). Some social science researchers consider CF to be a culturally specific phenomenon in Western cultures (Austin et al., 2009). Recent technological changes have led to a human condition Stjepan Meštrović has called postemotional (as cited in Austin et al., 2009, p. 198). This is due, according to Meštrović to people being overexposed to traumatic situations in news and entertainment venues. Technology advances have led to changes in social interaction patterns, such as the increase of remote over direct communication. Postemotional people separate their emotions from any compassionate reactions. Frequently the experience of emotion is synthetic, manipulated by the media. The postemotional state can be viewed as a precursor to CF. The global cultural development of postemotionality then leads to higher CF occurrence in specialized environments, including health care systems (Abendroth & Flannery, 2006; Bride & Figley, 2007; Johnson, 2008).

There is no question that the occurrence of CF is more frequent than in past years. A number of factors may be responsible. The number of acute care patients who are living longer is increasing. Emergency rooms are becoming overwhelmed with patients entering the healthcare systems, needing acute care, many uninsured and seeking care nowhere else (Hooper, Craig, Janvrin, Wetsel, & Reimels, 2010). Too often organizations providing care do not provide sufficient training and support for their staff to help them combat compassion fatigue. Aycock and Boyle (2009) found 45% of their national sample of oncology nurses had not received any training regarding their own coping, adaptation, or emotional self-care.

Coping Strategies to Avoid Developing Compassion Fatigue

There are, however, people who have developed effective coping strategies, the focus of this study. In addition to healthy habits of self-care, the positive reinforcement of watching patients recover, feeling effective, and being able to interact compassionately with patients helps HCPs avoid CF. Even without specific support from the organization, HCPs seek and receive support from coworkers, family, and friends (Abendroth & Flannery, 2006; Aycock & Boyle, 2009; Alkema, Linton, & Davies, 2008; Luquette, 1995).

In the past, the remedy of “detached concern” (Miller, 2007, p. 226) has been promoted for professional emotional control. HCPs make an effort to distance themselves from clients, patients, and patients’ families. With detached concern they consider situations objectively, and yet with caring. This strategy, however, does not appear to be successful in guarding against compassion fatigue, particularly for people with high

empathic concern and codependency issues (Aycock & Boyle, 2009; Bride & Figley, 2007; Miller, 2007). Although a person may have a detached but compassionate attitude for a familiar set of clients and patients, when a certain incident or trait occurs, it can trigger a CF reaction. For example, a highly competent and empathic physician lost her memory, compassion, and ability to work with patients over a 24 hour period after 9/11 due to her empathic response to the children who lost their parents in the disaster (personal observation, 2001). She had lost her own father when she was 11. The heightened stress of the situation added to a triggered recall of her own experience combined quickly to develop into CF.

Although training programs may emphasize the need to remain objective, the display of compassion is not a commodity which can be controlled and dispensed as needed (Miller, 2007). For example, in one quantitative study of Hospice nurses, 80% ($N = 216$) demonstrated moderate to high risk of compassion fatigue (Abendroth & Flannery, 2006), a finding repeated in numerous studies. Other programs and coping strategies being used successfully to counter CF are explored in chapters 4 and 5.

Differentiation between CF, Burnout, Secondary Trauma, and Vicarious Traumatic Stress

An overlap exists between the definitions and occurrences of CF, burnout, secondary trauma, and vicarious traumatic stress. At first Figley (1995) discussed CF as secondary traumatic stress disorder. Many people even now do not see a difference between burnout and CF (personal communication, C. Maslach, April 27, 2012). Van Hook (2008) described CF as having a rapid onset, but Stewart (2009) said that

symptoms of CF develop gradually, unnoticed, leading to a critical breakdown. CF and burnout can occur simultaneously, separately, or one followed by the other (Compassion Fatigue Awareness Project, 2012).

Burnout. In contrast to CF, burnout has a gradual onset of emotional exhaustion, hopelessness, and lowered self-efficacy, and is frequently associated with work environment (Van Hook, 2008). Maslach and Jackson (1985) defined burnout as a “syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do ‘people-work’ of some kind” (p. 837). A callousness may develop, leading HCPs to change from compassionate care for patients and clients to the negative view that these people somehow deserve their problems (Maslach & Jackson, 1985). Many of these traits overlap with those in CF. The differences lie in type of onset. Presence of work environment issues, which if resolved, can lead to easing burnout, but not necessarily CF.

In early studies of burnout it was generally assumed that women would be more prone to developing burnout than men. This may have been due to the prevalence of women in caring positions, in subordinate positions, and in being expected to care for people both at home and at work. The Maslach Burnout Inventory (MBI) was developed in order to empirically research the commonly held theories. Two surveys which used the MBI found no consistent difference between genders, except with regard to which aspect of burnout was salient (Maslach & Jackson, 1985). Men were more likely to develop depersonalization and callousness, whereas women were more likely to experience

emotional exhaustion and lower self-efficacy. No studies at that time distinguished between heterosexual and homosexual personalities.

A Swedish study (Rudman & Gustavsson, 2011) studied development of burnout symptoms in nurses, and found that initial exhaustion generally develops into burnout, due to dysfunctional coping. In their study a number of different trajectories occurred, with changes in burnout levels, depressive symptoms, and desire to leave nursing. The nurses most at risk for burnout were newly qualified and inexperienced. Kuhn, Goldberg, and Compton (2009) conducted a study of emergency room physicians, assessing the role of uncertainty tolerance in predicting career burnout. Almost a third of the physicians disclosed having experienced burnout at some level. The largest risk factor was high anxiety from concern for unsatisfactory outcomes.

Secondary trauma. Primary trauma occurs as actual experience of adversity. Secondary trauma, related to vicarious trauma (Stewart, 2009), can occur as a response to extensive media coverage of violence and disaster. It is more frequently related to work, such as being a counselor for veterans and other military personnel (Gregerson, 2007). By definition secondary trauma is due to exposure to someone else's extremely stressful events, such as working in an emergency room. The symptoms are similar to CF, rapid in onset, but associated with a particular event. They may include being afraid, avoidance behaviors, having interruptive images of the upsetting event, and difficulty sleeping. Secondary trauma occurs throughout our culture, and may be a primer for developing CF (Stewart, 2009).

Vicarious traumatic stress. The concept of vicarious traumatization (VT), or vicarious traumatic stress, as Figley (1995) termed it, developed as a type of countertransference when there is repeated “empathic engagement with trauma survivors and associated cognitive, schematic, and other psychological effects” (Sprang, Clark, & Whitt-Woosley, 2007, p. 260). For mental health professionals, VT can disrupt feelings of safety and trust, power and control, self-efficacy and self-esteem, and intimacy (Sprang et al., 2007).

Using narrative analysis, Harrison and Westwood (2009) studied how master mental health therapists countered developing VT while working with seriously traumatized clients. Nine themes emerged: creating meaning; developing mindful self-awareness; determining to embrace complexity and multiple realities; reinforcing professional satisfaction; maintain clear boundaries; finding ways to avoid isolation; and practicing active optimism (Harrison & Westwood, 2009).

Resiliency

Resiliency, the ability to spring back and recover from adversity, is not a fixed personality trait (Greene, 2002a), although there are standardized tests to measure it. One measurement instrument, used in management training, is the personal stress assessment inventory (PSAI, Kindler, 1981-1993). The youth risk and resilience inventory (YRRI) developed by Brady in 2006, is a more robust test used to screen for risk factors including bullying and victimization and to identify adolescent resilience assets (Huebner, 2003). Resiliency, like empathy, is a multifaceted response, dependent on environment, personality, situation, and cultural point of view, not easily assessed as a static trait. Each

discipline studying resiliency has a different definition for it. In order to understand the phenomenon of resiliency to compassion fatigue, a multisystem view is needed (Greene, 2002b).

Basic Assumptions and Theory

Components of resiliency include self-efficacy, adaptation, healing, wellness, and competence, all factors which can disappear in compassion fatigue. Recent studies of resiliency, part of the positive psychology movement, have examined people who do not become symptomatic (Linley & Joseph, 2005).

Early in the 1980s a longitudinal study, the St. Louis Risk Research Project, investigated the resilience of children who lived in risk-laden circumstances. This led to similar studies in numerous American cities. From these studies researchers determined risk factors and protective factors. In 1993 Benard suggested that resiliency in children correlated highly with the ability to form relationships, solve problems, develop a sense of identity, and the ability to plan and to hope (as cited in Greene, 2002a). Causative factors, however, were not established.

Although most studies of the time investigated resiliency in children and adolescents (Grotber, 1998), in 1983 Moskowitz studied adult Holocaust survivors and found their resiliency had “a high degree of ethical and spiritual involvement, social responsibility, and a strong desire to establish a family and a home” (Greene, 2002a, pp 7-8). One of the earliest social psychologists interested in resiliency, Bandura has researched self-efficacy, as part of social learning theory (Bandura, 1977a, 1982b).

At the time of the International Resilience Project (Grotberg, 1998) there were two primary ways to study resilience, either retrospective or concurrent studies. The emphasis was on psychopathology rather than on positive situations or attributes. Retrospective studies analyzed factors and traits from a large sample. Concurrent studies tended to focus on children and adolescents in school, or in detention (Grotberg, 1998). At this time a shift in focus was occurring: more attention was given to the developmental aspects of resiliency. Research participants were usually children and adolescents, but in a social context rather than in a laboratory.

In the late 1990s the ecological perspective brought a new dimension to resiliency theory, focusing on resiliency embedded within person-environment interaction at various levels (Grotberg, 1998). Saleebey's life course concept stated that transitions in life are "both expected and unexpected" and have a sense of "variety and evanescence through time and culture" (Saleebey, 1993, p. 204).

Although there is no unified resiliency theory, there are some basic assumptions. Protective factors exist in childhood, such as: (a) a child's personal disposition, responsiveness, and self-esteem; (b) the child's family milieu being cohesive and supportive; and (c) a social environment and culture which reinforces healthy behaviors, and supports belief systems (Greene & Conrad, 2002; Grotberg, 1998). Another assumption about resiliency is that it exists along a continuum and is dynamic, rather than a fixed individual trait. Palmer (2000) outlined levels of resilience:

1. Anomic survival, resilience to a continual state of disruption or chaos.
2. Regenerative resilience.

3. Adaptive resilience.
4. Flourishing resilience.

Resiliency as Part of Physical Health

Abundant research on physical resiliency has been done in medical studies demonstrating psychological that resiliency is a basic part of well-being and physical health. “Optimum health requires balance in all aspects of our existence—maintaining hope, optimism, and a positive attitude” (Riley, 2002, p. 171). Without hope and a positive belief system, physical resiliency plummets. The opposite of a placebo effect can happen due to various factors: the nocebo effect can occur when a person finds some benefit or secondary gain to prolonging illness or disability (Riley, 2002). In other words individuals can choose whether to engage their resiliency strengths, or not.

Individuals use their assumptions, beliefs, knowledge, and fears to arrange, rearrange, and interpret events to develop a story line through which day to day living is perceived. Imagination reflects the operation of the brain–mind. Body sensations caused by events outside and inside the body signal upward to the brain. Conversely, thoughts and feelings that the brain generates move downward to influence the body. (Spiegel, 1997, p. 617)

Coping, part of resiliency, can help regulate distress and management of the distress-causing problem, including physical health (Riley, 2002). On the other hand, an attitude can be too positive, distorted beyond being helpful, leading to unrealistic expectations that one can cure oneself without medical assistance.

Development of Resiliency

“Resilience is developmental. Being successful strengthens a person’s competence” (Greene & Conrad, 2002, p. 37). The development of resiliency is described by Wolin and Wolin (1995) in Table 1. They examined seven factors of resiliency across the lifespan, within substance-abusing families. Recent studies of how resiliency may be developed

Table 1

Developmental Phases of the Seven Resiliencies

Seven resiliencies	Child	Adolescent	Adult
Insight	Sensing	Knowing	Understanding
Independence	Straying	Disengaging	Separating
Relationships	Connecting	Recruiting	Attaching
Initiative	Exploring	Working	Generating
Creativity	Playing	Shaping	Composing
Humor			Laughing
Morality	Judging	Valuing	Serving

From “Resilience among Youth Growing Up in Substance-Abusing Families,” by S. Wolin and S. Wolin, 1995, *Pediatric Clinics of North America*, 42, p. 425. Philadelphia, PA: W. B. Saunders. Reprinted with permission.

have indicated that learning self-regulation is a key element (Hofer, Eisenberg, & Reiser, 2010). Self-regulation and effortful control may have biological bases within temperament (Hofer et al., 2010). As a healthy person grows from childhood to young adulthood, the executive function in the prefrontal lobes presumably develops. In this process effortful control underlies self-regulation (Hofer et al., 2010). Studies by Eisenberg, colleagues, and other researchers, have indicated that self-regulation positively correlates with social competence (Eggum et al., 2011). In contrast, children with lower self-regulation “exhibit more externalizing and/or internalizing problems. . . . Children who display externalizing problems tend to be more impulsive, spontaneous children, which might make them appear somewhat more resilient than they really are when dealing with a stressful situation” (Hofer et al., 2010, pp. 556-557).

Ego resiliency is another factor of personality which should develop as a person matures. Being ego resilient means being flexible in response and need to control one’s environment (Hofer et al., 2010). Effortful control is a strong component of this type of resiliency. Another aspect of the development of resiliency is socialization, the ability to find healthy support and maintain positive relationships. A key developmental component of socialization is familial expressiveness, both verbally and nonverbally (Hofer et al., 2010). In a healthy family situation, instead of repressing negative emotions, or having chaotic expression of them, children with parents may learn to express negative emotion in a beneficial manner, rather than have to regulate it by repression. Power (2004) found a high relationship between quality of a person’s parenting and quality of a person’s ability to cope, as well as high correlation between

resilience and high effortful control. In the Hofer et al. (2010) cross-sectional study of French adolescents, a few limitations existed: (a) no causal relationships between parenting and development of resiliency were made; and (b) no peer responses were included, despite the importance of peers during adolescent development.

Other contributors to resiliency. Over the past 30 years of research into resiliency, a number of factors contributing to development of resiliency have been posited: trusting relationships, emotional support outside the family, hope, responsible risk taking, sense of being lovable, unconditional love from someone, a sense of mortality, as well as spiritual belief (Grotberg, 1998). The International Resilience Project (Grotberg, 1998) found that genetic makeup and temperament in childhood were important components. At the time of Grotberg's study, Erikson's theories of development were used internationally without distinguishing gender or cultural/ethnic differences, limiting the study's generalizability. Another limitation, typical of that period of child-focused resiliency research, the participants were young children, from birth to eleven years of age.

Conditions of the environment during development have also been found important to resiliency growth. Less researched, but perhaps as important, are factors of the environment at the time of the adversity, and how they support or detract from resilient reactions. The cultural context, use of humor, and foundation of spirituality are part of the climate in which resiliency can be developed.

Environment and Culture. Antonovsky (1987) spoke of salutogenic factors of resiliency which could be developed in a biopsychosocial environment. The seven

elements of salutogenic resiliency are mastery, self-directedness, cooperativeness, optimism, humor, and a sense of coherence (Hansson et al., 2008). Working with veterans and service members when they have just returned from armed duty presented clinicians with an immediate environment of chaos and post-traumatic stress disorder (Voss Horrell, Holohan, Didion, & Vance, 2011). Restoration of coherence was essential for both the clinicians and their patients. If the working environment for the clinicians was not supportive, CF, secondary traumatic stress (STS), VT, or some combination of stress conditions developed. On the other hand, resiliency to these serious conditions could be developed within a caring workplace culture. This supportive culture could even lead to positive change for the clinicians, such as vicarious posttraumatic growth, and compassion satisfaction (Voss Horrell et al., 2011). Having support from coworkers and administration is key to positive results from coping with traumatized people. Voss Horrell et al. (2011) presented a number of preventive measures (seen in Table 2) which can be taken by an organization and its clinicians. In their summary, Voss Horrell et al. (2011) spoke of the urgent need for clinicians to work within a supportive environment, and welcome assistance from trusted colleagues. “Working with victims of trauma fundamentally and unavoidably changes the way you see the world” (Voss Horrell et al., 2011, p. 85).

In a very different environment and culture, Borofsky and Fox (2009) investigated resiliency among Hawaiian youth who had attended culture-based schools. In 2000 the first Native Hawaiian charter school opened, followed by 11 more. The goal of these schools was “to bring ancient wisdom to modern life” (Borofsky & Fox, 2009, para 3).

Table 2

Suggested Preventive Measures Against Vicarious Trauma, Burnout, and Compassion Fatigue

Organizational	Clinician
Reduced clinicians' caseload size	Engage in leisure activities outside work
Divide responsibility for trauma patients between multiple providers	Balance caseload with variety of patients
Allow clinicians autonomy in scheduling	Create a strong support system outside of work
Provide appropriate resources (e.g., manuals, test materials, etc.)	Be aware of PTSD [CF, STS, or VT] in self
Provide support staff to manage administrative issues	Seek therapy if necessary
Encourage discussion and healthy debate among team members	Seek support from other colleagues
Offer peer-support groups for staff	Nurture one's spiritual self
Provide training related to trauma-specific issues and evidence-based practices	Keep abreast of current research on evidence-based practices
Provide supervision opportunities for all clinicians (regardless of licensure)	Seek supervision as needed
Encourage diversity in staff responsibilities (e.g., supervision, research, etc.)	Maintain a balanced workload (e.g., engage in activities other than clinical duties, such as research and teaching)

(continued on next page)

(Table 2 continued)

Organizational	Clinician
Provide opportunities for staff development	Participate in professional development activities and continuing education
Regularly reward staff successes	Maintain good physical health (e.g., sleep, hygiene, exercise, healthy eating)
Encourage intake interviews prior to clinician assignment	

From “Treating Traumatized OEF/OIF Veterans: How Does Trauma Treatment Affect the Clinician?,” by S. C. Voss Horrell, D. R. Holohan, L. M. Didion, & G. T. Vance, 2011, *Professional Psychology: Research and Practice*, 42(1), p. 81. Reprinted with permission.

Being surrounded by a supportive culture with familiar values led to an increase of resiliency in the young people.

Another study of correlation between culture and resiliency was conducted in 2010 by Thomas, who was interested in indigenous children in British Columbia. The Métis Nation, known for their ability to resist colonization, developed a code of ethics with conceptual similarities to good social work practice: children are sacred, and deserving of love and compassion. Familial bonds, identity, and spirituality are integrated parts of the Métis tradition (Thomas, 2010). Using a transcendental social paradigm, Thomas studied the Métis traditions as another valid reality, a social environment in which resiliency was developed naturally. Aspects of this supportive culture include “intention, naming, tradition, play, and ritual” (Thomas, 2010, p. 94). Another indigenous

aid to developing and maintaining resiliency is humor as part of the healing process (P. Carmoney, personal communication, March 28, 2012).

Humor. Having a sense of humor has been considered a favorable personality trait underlying resiliency (Veselka, Schermer, Martin, & Vernon, 2010). There are several types of humor, according to Veselka et al. (2010):

- Affiliative humor: Joking in order to strengthen interpersonal bonds.
- Self-enhancing humor: Using humor to bolster outlook and cope with stress.
- Self-defeating humor: Remarking in a self-disparaging way in order to create interpersonal bonds.
- Aggressive humor: Using sarcasm and ribbing to demean others and rise above them.

The Veselka et al. (2010) study examined what they termed mental toughness, using the MT48, a Big Five factors of personality standardized test, and the Humor Styles Questionnaire (HSQ), developed by one of the study authors. Their theory, based on common sense, was that positive humor (affiliative or self-enhancing) aids in resilience, but negative humor (self-defeating or aggressive) does not. The study report did not indicate validity or reliability factors of either test. Both tests have been used, however, by other researchers, including Hampes (2010).

Using the HSQ and the Interpersonal Reactivity Index (IRI), Hampes studied the relationship between humor styles and empathy. A high positive correlation between self-enhancing humor and perspective-taking empathy resulted, as well as a negative

correlation with personal distress. Affiliative humor did not have these correlations, although it was positively correlated with measures of empathic concern. A strong negative correlation existed, as might be expected, between aggressive humor and all types of empathy—cognitive, perspective-taking, and emotional (Hampes, 2010).

Coping with traumatic events, particularly for first responders, frequently leads to what is known as gallows humor (Alvarado, Scott, S. T., Scott, R., & Bledsoe, 2011). In a 2003 study, Haslam and Mallon found gallows humor was the most commonly cited coping strategy (Alvarado et al., 2011). This type of humor is based on either the immediate event, or the ongoing stress of jobs and life situations, and is considered by some to be crass and untasteful. In fact, however, a few studies have shown that satirical treatment of a serious or frightening event has the benefits of increasing positive relationships within a cohort, providing a sense of belonging to a supportive team, and acting as a release valve for accumulation of stress (Alvarado et al., 2011). Although gallows humor can help strengthen resiliency for first responders, other characteristics need to be present to help find meaning in the violence and chaos of their work (Green & Conrad, 2002). Strengthening an individual's resilience by any means, from use of humor to attention to spirituality, can lead to personal transformation (Canda & Furman, 1999, Joseph, 2005).

Spirituality. Religion and spirituality overlap, but they are different concepts. Canda and Furman (1999) defined spirituality as “an aspect of a person or group dealing with a search for meaning, moral frameworks, and relationships with others, including ultimate reality” (p. 44). Religion, which can be an important element in a person's

resiliency, is a concrete, organized expression of spirituality. “Spirituality can exist without religion and religion can exist without spirituality” (Farley, 2007, p. 3).

Table 3

Spiritual Components that Enhance Individual Resiliency

Trait	Spiritual/religious components that support
Insight	Mechanism for explaining the world: Spiritual nature may provide drive to find meaning.
Independence	Transcendence of daily living through various rituals and experiences
Relationships	Caring, compassionate, affirming community alternatives comparable to family.
Initiative	Transforming self and the world: Service to help, heal, save and reconcile.
Creativity/humor	Spiritual source, inspiration to create beauty: Transformation.
Morality	Multiple systems for integrity with values, ethics and social justice.

From “Making the Connection: Spirituality, Trauma and Resiliency,” by Y. R. Farley, 2007, *Journal of Religion & Spirituality in Social Work*, 26(1), p. 6. Reprinted with permission.

Spirituality can help, as part of resiliency, to provide structure for interpretation, definition of identity, and help in forgiveness (Greene & Conrad, 2002). Through spirituality an individual can look beyond a personal reality, and experience something greater (Farley, 2007). This part of resiliency has been difficult to assess, although future qualitative studies may describe more fully how spirituality aids in resiliency. Farley (2007) suggested spiritual components which could enhance resiliency (see Table 3).

Having hope and finding reassurance during stressful experiences are part of the development of resiliency (Williams, 2002). “Spirituality deepens and expands a person’s values and perspectives, allowing for the possibility of viewing adversity as an opportunity for personal growth and development” (Williams, 2002, p. 205). Transformation of stressful life experience into something in which one can find meaning, heightened self-value, and increased connection with one’s universe, has often been seen in healthcare and psychological professions.

Posttraumatic growth and vicarious resiliency. According to traumatic stress researchers, resiliency involves more than resisting maladaptation (Roisman, 2005), and may lead to actual growth, what Linley and Joseph (2005) termed adversarial growth. Some nurses have experienced this, rather than developing CF: They actually feel stronger because of their satisfaction in being able to help (Abendroth & Flannery, 2006).

Vicarious resiliency, appreciating what one has learned from stressful experience, may strengthen the sense of well-being. HCPs may be able to incorporate what they learn from their clients and patients healing processes (Hernández, Engstrom, & Gangsei, 2010). This strengthener of resiliency can counteract deterioration toward CF, increase motivation, and find new ways the HCPs can take for healing themselves. Figley's (2002) model (see Figure 1) demonstrates that compassion and empathy relate to finding self-satisfaction in stressful or traumatic work; prolonged exposure to the client's trauma can cause CF.

Posttraumatic growth is a phenomenon where trauma survivors find positive transformation from the traumatic experience (Hernández et al., 2010). A new point of view occurs, "the recognition of new possibilities for one's life, a greater appreciation of life and personal strength, and spiritual development" (Hernández et al., 2010, p. 71). A form of altruism may develop, a wider view of the larger community, as well as increased compassion. The difference between vicarious resilience and posttraumatic growth is the point of focus: vicarious resilience is within the HCP; posttraumatic growth takes this new resiliency outward to clients, patients, and community (Hernández et al., 2010).

Removal of risk factors may help reduce CF, but developing positive health beyond resiliency, as described by Seligman (2008) and others (Cameron & Brownie, 2010; Linley & Joseph, 2005; McMullen, 2007; Roisman, 2005) may be possible based on the findings of the present study and related research into the people who do not develop CF. Developing resiliency, without attenuating compassion, is necessary in order to provide quality care. If the characteristics leading to resilience and positive health are

determined, creative treatment and training methods could encourage health practitioners to strengthen them in each other (Gregerson, 2007; Seligman, 2008).

Phenomenological Methodology

Studies of phenomena which affect people subjectively, and which occur outside of controlled environments, do not lend themselves to the objectivity, experimental control, and exact measurement of positivist, quantitative methods (Davis, 1998). Because the research questions of the present study examine subjective perceptions, values, and meanings ascribed by health professionals to CF resiliency, qualitative research was most appropriate.

The qualitative methods which could have been used were case study, narrative analysis, ethnography, grounded theory, and phenomenology. Case study, as used by Figley (2002) in providing foundational research into CF, is appropriate for holistic, intensive inquiry into one or several individuals' experience. A limitation of case study is that findings cannot be generalized until additional research is performed (Creswell, 2007). Narrative analysis is pertinent for exploring one or several individuals' life history, but does not have a narrow focus on a single type of event or phenomenon (Creswell, 2007). Ethnography describes a group experience shared through a culture, and may be used in a study of resiliency within the medical profession, but would not have the depth of investigation found in phenomenology (Creswell, 2007).

For the research questions of this study, phenomenology was particularly suited for discovering the essence of an experience or recurring situation and the meanings people ascribe to it (Moustakas, 1994; van Manen, 1990). Several forms of

phenomenological study exist in the social sciences. These are explored in the next section, with an explanation of why I chose to base my methodology on a combination of the research methods of van Manen and Moustakas.

The strength of phenomenology lies in the possible development of a rich, poignant description of lived experience (Finlay, 2009). In contrast to quantitative research, using methodology paradigms based on the physical sciences, phenomenology allows deeper penetration into the meanings ascribed to a situation, such as resiliency to CF (Moustakas, 1994; van Manen, 1990). Various forms of phenomenology have been used increasingly in studies of medical concerns, due to the ability to explore the ambiguity present in the subjective experience of illness or wellness (Finlay, 2009; Rapport & Wainwright, 2006).

Approaches to Phenomenology

The philosophical phenomenology of Edmund Husserl, Maurice Merleau-Ponty, and others influenced the development of methodological phenomenology used in the human sciences. It was not intended as a procedural model to be used in research (Earle, 2010). Basically phenomenology studies how we experience life (D. Smith, 2008). For Husserl, intentionality referred to the structuring of forms of experience, a conscious directedness of experience through concept, thought, and image, a type of mindfulness (D. Carr, 1977; Husserl, 1931, 1970a; D. Smith, 2008).

From the philosophical foundations of phenomenology seven traditions developed (D. Smith, 2008), each leading to a variation of research methodology:

1. Transcendental constitutive phenomenology: the study of experience of objects and events within pure or transcendental consciousness, without regard to the natural world. Moustakas was interested in this, as will be discussed later in this section.
2. Naturalistic constitutive phenomenology: the study of conscious experience of situations in the natural world.
3. Existential phenomenology: the study of human experience in concrete situations, with a focus on free will.
4. Generative historicist phenomenology: the study of how experiential meaning is generated over time as collective experience.
5. Genetic phenomenology: the study within an individual's experience of the development of meanings of experiences and objects.
6. Hermeneutical, or interpretative, phenomenology: the study of how we interpret readings, works of art, our interactions with others. Heidegger (1968) was heavily instrumental in developing this. Van Manen (1990) used it as foundation for his research methodology in pedagogy.
7. Realistic phenomenology: the study of human conscious interaction with external reality.

Inherent in these different methodological processes is the iterative process of gathering information, engaging with the participants. In contrast to content analysis, where the researcher knows beforehand what is to be discovered, phenomenological methods aim at having no presuppositions or specific expectations (van Manen, 1990).

Van Manen

In 1990 van Manen proposed specific guidelines for studying a single event or recurring episodes from first person points-of-view, based on Heidegger's hermeneutical phenomenology. Van Manen (1997) believed that memory and reflection of experience is based on language. Therefore phenomena can be understood through the structure of language: "All experience, all human interactions, as some kind of text" (van Manen, 1997, p. 39). Language itself, in both creation and interpretation, deepens understanding of the phenomenon. Writing and research are part of retrospective, rather than introspective, reflection in phenomenological analysis. Three paramount guidelines van Manen proposed were: (a) reflect on essential themes, the essence of the lived experience; (b) maintain a strong, oriented focus; and (c) balance the research context by considering both components and whole (van Manen, 1990, pp. 30-34).

Writing and rewriting is a key element of the process of hermeneutical phenomenology. The treatment of redundant information, not necessarily important philosophically, may be significant psychologically (Giorgi, 2006). In other words, instead of omitting similar statements, the researcher will create a composite statement indicating the general frequency or value placed on the theme by the participants. The holistic nature of phenomenology is therefore preserved, revealing meaning units, and values, as well as context.

Moustakas

The transcendental phenomenological approach developed by Moustakas was based on a dynamic model which evolved as the essence of the phenomenon was

uncovered (Davis, 1998). Moustakas's term "transcendental" referred to a methodology which included the process of Epoché, acknowledging the presence of the researcher in the study (Giorgi, 2006; Moustakas, 1994). In this interpretation, Epoché refers to putting away previous knowledge, schema, and suppositions while gathering the new data, but retaining within the researcher a transcendental consciousness (Moustakas, 1994).

Moustakas (1994) used systematic phases in collecting and analyzing data, with iteration of any phase as new information arose. In addition to the textural description of the phenomenon which van Manen focused on, Moustakas believed a structural description should also be developed (Moustakas, 1994; van Manen, 1990). The textural description of the experience "includes [the] thoughts, feelings, examples, ideas, [and] situations" each individual has had with regard to the phenomenon (Moustakas, 1994, p. 47). The structural description of an experience provides the "underlying and precipitating factors that account for what is being experienced," and "the conditions that must exist" (Moustakas, 1994, pp. 97-98).

Part of the phenomenological process is to decrease any barriers to participation in research, to increase the autonomy of participants, and to validate the individuals' experiences (Creswell, 2007). Both van Manen and Moustakas found the researcher's field journal useful as part of the paradigm, encouraging humanistic considerations of the participants and the phenomenon. In the field journal a researcher includes her own experiences, feelings, thoughts, as well as field data (Moustakas, 1994).

Moustakas, in addition, advised the use of an interview worksheet to guide the process, maintain focus, and prevent side excursions which may tempt the researcher

(Creswell, 2007). In Moustakas' heuristic process the self of the researcher is present throughout the study, incorporating self-discoveries into the findings. While gathering information, however, the interviewer should bracket her own attitudes and assumptions, and remain as quiet as possible in order not to bias the descriptions and explanations of the participants.

Combining heuristic phenomenology with the hermeneutic approach in considering the life experiences of the participants, it is possible to elicit new ideas, feelings, and points of view. For example, the interviewer uses a reductive process to describe what is perceived beyond the words. The interview and analysis phases generally require iteration, obtaining new views, and continuing until there is saturation of information.

A third phase in Moustakas's phenomenological process is imaginative variation. During this phase various positions, roles, or points of view which might occur with regard to the phenomenon are imagined. The purpose is to develop structural descriptions, the foundational and precipitating factors which account for the participants' experiences (Moustakas, 1994, pp. 97-98). The specific steps for imaginative variation are presented later in Chapter 3 within the section, Data Analysis.

Gaps in Knowledge

Counterarguments and Limitations of Prior Research

A convergent definition of empathy does not yet exist, although increased attention to the neural underpinnings of various aspects of empathy are bringing better understanding. There is no consensus about the distinctions between CF, secondary

trauma stress, vicarious trauma, and similar difficulties. Insufficient research exists into the interaction between emotional contagion and the psychoneuro-immunological system. The contradictory results of studies of the affects of stress or depression on the immune system may have been due to differences in duration and style of the methodology, cross-sectional rather than longitudinal, as well as due to not controlling for confounding variables such as chronic disease, disability, nutritional status, obesity, marital changes, psychotropic drugs, smoking, and alcohol consumption (Fortes et al., 2003). Other studies did not take consideration of within-individuality variations of immunity or depression levels over time (Fortes et al., 2003).

The presence of mirror neurons as explanation for sensorimotor simulation and mimicry is strong, but it is not universally accepted as explanation for empathy or emotional contagion (Thioux, Gazzola, & Keysers, 2008). Due to the automatic and unconscious nature of emotional contagion, it is difficult to make conscious attempts to regulate it (Williams, Bargh, Nocera, & Gray, 2009). The Williams et al. (2009) study was based on the hypothesis that nonconscious self-regulatory processes, which are not subject to the same limitations as conscious processes, would help. They found that in the complexity of real-world environments, this hypothesis could be successful.

Another area where studies may be limited is in the measurement of empathic accuracy (Zaki, Bolger, & Ochsner, 2009). Empathic accuracy occurs when the perceiver is able to correctly identify the internal state of the person observed. Little research has yet been done in examining the specific types of information which support empathic accuracy. As more research is done on empathy, a growing number of psychologists

favor a combination of ToM, TT, simulation theory, and PSS as an explanation. Various studies of empathy and emotional contagion differ concerning which explanation of empathy is a subset of which, or whether everything is linked in a complex network of multifunctional brain sources of empathy.

Understanding how to intervene with negative emotional contagion, as part of CF, could help reduce the occurrence of this debilitating syndrome. More in-depth neuroscience research relating emotional contagion to the psychoneuroimmunological system is greatly needed. In addition, the use of qualitative research methodologies like phenomenology may give more depth of definition to CF, empathy, emotional contagion, and resiliency.

Areas for Future Investigation

Too little is known about the positive outcomes from dealing with trauma, such as posttraumatic growth and vicarious resilience. Most of the studies about CF have been correlative, quantitative, based on limited populations, and focused on risk factors, rather than resiliency strengths. Little is known about what contributes to resiliency to CF (Cameron & Brownie, 2010). No research has yet been done on the outliers, the people who are empathic, yet resilient, and do not develop CF in situations where most others do.

Although an increasing amount of research is being done studying the neural links of empathy, there are no apparent studies of the connection between chronic negative emotional contagion and the psychoneuroimmunological system. It would be interesting to know what specific immune reactions occur to any type of emotional contagion.

Although Hatfield and her colleagues (1992, 1994, 2009) have studied the “what” of emotional contagion, and Rothschild (2006) has presented ways to circumvent negative reactions from emotional contagion, more research is needed into the effectiveness of these interventions, and what actually happens neurologically if emotional contagion is interrupted or stopped. Other areas of research which need to be studied:

- How does emotional contagion occur when a person has limited sensory input?
- Who is most vulnerable? And when?
- What are the social implications if a person has more ability to “infect” others with emotional contagion, or if a person has a lower or higher ability for healthy emotional contagion?
- Are there other explanations of emotional contagion (e.g., morphic field theory) which are valid?
- What happens if someone consciously tries to imitate (e.g. neuropsychological programming) another’s emotion?
- What are the most effective ways to teach people to be more adept in understanding others’ emotions, and improving their own emotional intelligence, and yet retain resiliency to CF?

Summary of Chapter

This chapter began with the mechanics and organization of the literature review. Empathy was demonstrated as a necessary capability in order to have compassion, as well as CF (Figley, 2002). Emotional contagion, particularly negative emotional contagion

due to continued contact with patients and their families, also can lead to CF (Grafton et al., 2010). Resiliency based on insight, balance of control and independence, strong relationships, initiative, humor, creativity and flexibility, is needed to cope with CR (Alkema et al., 2008; Wolin & Wolin, 1995). Because phenomenology is the method used in this study, the chapter ended with an overview of the phenomenology of Moustakas (1994) and van Manen (1997) which I will use in the study. The purpose of the chapter was to provide a foundation of what has been researched and written about these elements—empathy, emotional contagion, CF, and resiliency—and also to indicate what limitations and gaps exist in this knowledge. The following chapter will discuss in detail the methodology used, and its rationale.

In reviewing the different studies presented here, researchers may need to pay more attention to meta-analyses, and interlink research of all concepts of empathy—anthropological, developmental, evolutionary, sociological, cognitive, and emotional.

As a result, it may be possible, with intense clinical intervention, to develop empathic responses where deficits now exist (Wolf et al., 2001).

The neural circuits regulating social behaviors, including empathy, may therefore overlap with those regulating visceral homeostasis. An individual's capacity for empathy and emotional contagion is a dynamic characteristic which exists on a continuum.

Emotional contagion, as part of empathy, facilitates social interaction. As part of CF, however, emotional contagion can make a person vulnerable to absorbing negative emotions (e.g. fear, anger, sadness) and stress.

Fortunately, if a person's cognitive empathic ability is strong, this can be used, with training, to inhibit emotional contagion (Rothschild, 2006).

There is, however, no single composite theory of resilience (Greene & Conrad, 2002).

Chapter 3: Research Methodology

Learning about the meanings of others' experiences demands an eclectic and holistic paradigm of methodology (Papadopoulou & Birch, 2009). This chapter will present the research questions, and how the chosen methodology of phenomenology pertains to these questions. Each aspect of the phenomenological process will be discussed.

Research Questions

The purpose of this study was to determine the essence of resiliency to compassion fatigue, using paradigms from empathy, emotional contagion, resiliency, and compassion fatigue theory. In refining the research questions, I spoke individually with a panel of experts who informed the direction of the research. The meanings these five professionals ascribed to the phenomenon of resiliency to CF helped define positive traits and behaviors possibly leading to this resiliency, as well as methodology for the study.

The primary research question was: What is the collective essence of healthcare professionals' experience of resiliency to compassion fatigue? The secondary questions were:

Research Question 2: What distinctions and similarities do healthcare professionals experience between burnout, CF, and vicarious trauma?

Research Question 3: What qualities and characteristics do health care professionals experience as supportive to being empathic and yet resilient to CF?

A phenomenological method was used for this study. According to Moustakas (1994), one of the characteristics of a research question suitable for phenomenology is

that the answers will reveal deeper essences and meanings of human experience and behavior. Phenomenology should not seek causal relationships, models, or predictions. Instead of measurements or scores, the results are interpretative, accompanied with comprehensive and vivid descriptions, based on the participants' interview responses. Another aspect of phenomenology is that "it engages the total self of the research participant, and sustains personal and passionate involvement" (Moustakas, 1994, p. 105). Semistructured interviews, using open-ended questions following an interview worksheet (see Appendix E), were used, followed by memberchecking of the interview transcripts to provide consistency and validity to the study (Creswell, 2009; Moustakas, 1994).

Research Design

Choice of Methodology

The study used a paradigm based on the interpretative phenomenology of van Manen (1990) and descriptive phenomenology of Moustakas (1994). The phases of the study were interwoven, rather than completed in discrete steps. Keeping a field journal was an important part of maintaining cohesion and coherence. In this journal, I documented the epoché, a self-assessment regarding my own perceptions and meanings of empathy, CF, and resiliency to CF, as well as the experience of conducting the interviews and analyses. This self-analysis process continued throughout the project, beginning before recruitment, continuing through data gathering and analysis, into the writing and rewriting of the study, and dissemination of its results. The importance of

language, emphasized by van Manen (1990), influenced both the field journal documentation, and the information analysis.

Following Moustakas' (1994) guidelines, the phases were: (a) methods of preparation; (b) methods of collecting data; (c) methods of organizing and analyzing data; and (d) methods for reporting data. The fluidity of the entire phenomenological process required these phases to interweave and iterate. As new themes emerged, new questions arose, but the overarching research question continued to provide focus. Many of these new questions are included in chapter 5.

Role of the Researcher

In phenomenology the researcher takes a subjective role within the study (Creswell, 2007; Moustakas, 1994; van Manen, 1990). I bracketed my preconceptions, experiences, and theories, using epoché, following Husserl (1931) and Moustakas (1994). Doing this enhanced my ability to be fully present with each person. Although epoché is seldom achieved perfectly, the attempt to achieve it brought an energy, intention, and alertness to the process of data gathering (Moustakas, 1994). My views preceding, during and after the interviews were written in the field journal; the pertinent ones are summarized in chapter 5. Although I met one of the participants in a professional setting years before the study, there were no ongoing relationships between us. No relationships developed during the study, therefore no participant was discontinued.

I conducted interviews using a guided set of open-ended questions and prompts. With the participants' permission, I captured the interviews with digital recording, as well as handwritten notes. I reviewed the transcriptions from the digital recordings, and

verified them with the digital recordings, as well as memberchecking. Interaction with the language is an important part of the interpretative phenomenological process, according to van Manen (1990). In the interviews I used a practice Finlay (2005) termed “reflexive embodied empathy” with an “embodied intersubjective relationship” (Finlay, 2005, p. 271). This type of empathic communication involves different layers of intersubjectivity possible between researcher and participants. The first layer of this intersubjective relationship is a physical empathic reaction with each other. A second layer focuses on the cognitive aspect of empathy, where each person imagines the other’s being, mirroring and doubling what is imagined. The deepest layer is one of full empathic engagement, combining all cognitive and affective aspects of empathic understanding (Finlay, 2009). The reflexive embodied empathic process was begun with a few moments of quiet centering at the beginning of each interview, which all of the participants appreciated.

Once the interviews were transcribed, I horizontalized “textural meanings and invariant constituents of the phenomenon” (Moustakas, 1994, p. 97). In horizontalization, the second step of the phenomenological data analysis process, every significant statement, or horizon, relevant to the topic is listed. Each statement, or horizon, of the experience, is given equal value (Moustakas, 1994). Using qualitative organizational software (NVivo 10) to assist the process, I determined themes and their relationships by clustering the horizontalized data. This led to both a structural and textural description of resiliency to CF, as experienced by the participants. Details of this process are presented later in this chapter, and in chapter 4.

I have a background as an organizational consultant for over 15 years (see Appendix J, Curriculum Vita). During this experience I developed my interviewing skills, as well as analytical and synthesizing abilities. My study of empathy and CF over a number of years, as well as learning theories of why and how CF occurs, could have brought a bias to the interviews and analyses. I tried to be alert to this possibility, and eliminate it whenever needed. The study followed a positive psychology paradigm, examining strengths rather than risks, with the aim of uncovering traits and behaviors of resiliency, rather than testing theories on risk factors of CF.

Context for the Study

Data was gathered primarily at a teaching hospital in northwestern United States. Four other local hospitals were also represented, two participants working at both the primary hospital and another, and two working solely at other hospitals. Although CF occurs in many settings outside of organized health care, this study focused only on CF resiliency in the large medical facilities mentioned. Before recruiting participants I presented the proposed study to the director of nursing research at the primary hospital. She indicated agreement in a letter of cooperation (see Appendix D for a draft of this document), after determining that approval from my university was sufficient.

Although the context of a phenomenological study may change during the course of the study (Moustakas, 1994), the context of this study remained constant. The context from a pure, uninvestigated situation was altered due to my subjective presence within the study of the researcher as primary data collector, analyst, and synthesizer (K. Irwin, 2006). Due to the perception some participants may have had of me as interviewer-

expert, a certain power disparity (K. Irwin, 2006; Thapar-Björkert & Henry, 2004) may have occurred. I attempted to reduce this disparity and increase autonomy of the participants by allowing them to select their interview locations (Irwin, 2006), and determine the duration of interviews.

Participant Selection and Recruitment

The focus of qualitative research is the description and interpretation of human experience, which requires depth of intense, saturated depictions (Polkinghome, 2005). Therefore, the participants for this study were selected, not for representative requirements of statistical inference, but for their value in providing clear, in-depth description and interpretation. Although the proposed study expected to use nine to twelve participants, data saturation was achieved by the end of the seventh interview, so no additional participants were recruited.

Access to participants. This study used a chain referral process for purposive recruitment. After the representative from the primary hospital signed the letter of cooperation (see Appendix D), she referred me to several key people. My intention was to include participants from departments known to have high risk for CF: palliative care, particularly for children; cancer care; long-term rehabilitation; physical therapy; pain clinics; and other areas where medical staff have longer interaction with a patient and the patient's family (Abendroth & Flannery, 2006).

The original intention of the study was to meet potential candidates, as well as participants in their choices of venue. Unfortunately, at the beginning of data collection I suffered a concussion and spinal injury, requiring home rest and immobility for two

months. Several candidates chose to come to my home for their interviews, and one chose to be interviewed by phone.

Recruitment procedures. I met with candidates in three different ways, in person, by email, and by phone. Most of these people had learned of the study from key people in their department, who in turn, had learned of the study from the head of nursing research. In our introductory meetings, I briefly explained the project, and what was expected of participants. I determined the candidate's level of interest, as well as whether or not the candidate met the criteria for being a participant. In all cases, the candidates met the study's qualifications to be participants.

I then presented each candidate an informed consent letter (see Appendix B), and explained it. In some cases the participants received and signed this consent form, using email. In a few cases, this happened at the beginning of the interview, although a digital copy had been sent to the candidate prior to the interview. All participants signed the consent form electronically or by hand. The interviews were scheduled for a location of his or her choice, at a time convenient for each participant. Between the initial contact and the interview I answered any questions concerning the project. I asked for referrals to other people who might be interested in participating, as part of the chain sampling method.

The first key person to whom I was referred by the head of nursing research was a co-coordinator of procedures in oncology nursing. After a meeting in which I described the project, she invited me to a monthly meeting of representative nurses from various

areas in oncology. I presented the project and an invitation to participate. Other than this, I did no additional recruitment.

Criteria used for selection. Purposeful selection of participants was to include nine to twelve people who could be key informants. Moustakas (1994) suggested essential criteria for participants should be they: (a) have experienced the phenomenon; (b) have high interest in it; and (c) are willing to commit some time to the study process. In this study, all of the participants will have experienced CF, either having the disorder or by witnessing a coworker develop CF. The participants should have a general knowledge of the characteristics and behaviors of an empathic person, as well as what CF is. Initially the study planned on excluding anyone currently experiencing CF. One candidate asked to be included, even though she admitted to be in burnout. As this was not CF, I included her as a participant, in order to learn the differences between burnout and CF, if any existed.

No minors or other vulnerable populations were approached to become participants. The study was open to any age, sexual orientation, gender, ethnicity, nationality, or socioeconomic status. Later studies may research whether any of these factors affect the occurrence and experience of CF, but none of those factors were part of the study. Although age was not be a discriminating factor, the participants were to have at least five years experience in their current specialty area. This criterion was met by all participants, as seen in Table 4 in chapter 4. In order to provide contrast, depth, and triangulation to the study, most participants were from different health disciplines.

During the first screening interview, I discussed briefly the areas of CF and empathy, in order to assess the value of the candidates' interpretation and knowledge. The meanings for CF, as well as for empathy, differed from individual to individual, adding range and breadth to the data gathered. It was not necessary or desirable for the study that a consensus of definition be reached. The most important selection criteria was the amount of information each person could provide describing the phenomenon of empathic people's resiliency to CF, and their interpretation of it. The number of participants depended on data saturation, as indicated above.

Establishing Working Relationship with Participants

In qualitative research it is very important to establish good working relationships with participants (Creswell, 2007; Moustakas, 1994; van Manen, 1990). I was the primary data collector and interpreter. Without a good relationship with the participants, the depth of their experiences and what it means to them cannot be attained. In the hermeneutic interview within van Manen's methodology, the interview process tends to turn participants into collaborators on the project (van Manen, 1990, p. 63). Without this type of relationship it may be difficult to hear a "lived-experience description" and interpretation from the participant (van Manen, 1990, p. 64).

To achieve this type of description and interpretation, I scheduled the interviews at times determined by the participants, and at locations they choose. As the depth of information an individual may provide can be negatively impacted by the presence of the other person, or the account colored by the other person's reactions, the interviews were for one person at a time.

I planned to use whatever method of communication worked best for each participant during the interview, whether simply talking about feelings, experiences, observations, or supplementing this with graphic displays, charts, data sheets, or any other information source. None of the participants needed anything more than being listened to. I encouraged the participants to avoid causal explanations or generalizations concerning resilience to CF. The participants were encouraged, instead, to describe particular incidents, and provide specific examples.

The questions in the interviews followed the train of thought each participant presented, allowing the participant to reflect on what was said, and make amendments and additions. Memberchecking was used to refine their descriptions and interpretations. As the interviews progressed, any misconceptions which appeared were resolved. I accepted and supported open disclosures, as recommended by Moustakas (1994, p. 110). At the completion of the data gathering and memberchecking, I sent each participant a letter of gratitude for his or her contribution to knowledge concerning the nature, meaning, and essence of the phenomenon, empathic people's resiliency to CF.

Compensation. No compensation in the form of monetary payment or gift was given to the participants. Instead, I offered each participant a copy of the summary report, and if they were interested, a short presentation and discussion session of the results to their departments.

Ethical Protection of Participants

The ethical issues of qualitative research overlap with those of quantitative research, but are more based in the relationship between participants and researcher.

Qualitative researchers need to be more subjective than in quantitative studies, which can create boundary issues. I followed Walden University's Institutional Review Board (IRB) guidelines in ethical protection. As part of this, I strove to be honest and open in relationship with the participants, to minimize any blurring between roles as professional researcher, professional acquaintance, and friend.

The study presented minimal risk to participants in terms of unintended disclosure of information, physical or psychological harm. No vulnerable populations were involved. During the research study the identities and names of participants were masked. The process of phenomenological research may extend over time, creating a climate of exchange of intimate details between researcher and community. This exposure may lead to harmful repercussions (LeCompte & Schensul, 1999a).

All possible ways to minimize external disclosure of these intimacies was taken. A coded identification was given each participant. The cross-list was available only to me for use in crosschecking information with the individual participants, and was destroyed at the end of the project. I was the only person gathering, analyzing, and summarizing the data. The professional transcriber received digital recordings with all identifying data removed. In addition, she signed a confidentiality and nondisclosure form. I verified the transcripts against the digital recordings of the interviews. The participants each verified their individual transcripts. Although the final report is available to the participants and their respective departments, any identification of who said what has been removed.

It is possible during the interviews, despite precautions to minimize harm, the recollection of upsetting experiences may be uncomfortable to some participants. This

happened with one. I suggested psychological counseling to the participant, who affirmed this was already being used. I did not attempt to provide counseling. As part of the informed consent letter, each participant was given access information for both me and my dissertation committee chair in case of any difficulties or questions.

Informed consent. In the informed consent letter (see Appendix B), details of the project such as the general purpose and benefit, duration of the study, as well as the extent and type of participation, was presented. The reasons why people were being approached to participate was given, and the possible minimal risks. The informed consent letter also disclosed how information was kept secure and confidential. The informed consent letter told potential participants that data would be securely stored in password protected files, on a peripheral hard drive kept in a lock box. Also, none of the individual's confidential information would be used for any purpose outside of the proposed project. At any time during the study, participants could withdraw with no consequence to them, but none did. I explained the informed consent letter when I gave it to each participant.

Protective measures. Even when there appears to be minimum risk to the participants, I needed to be alert to the potential dangers, and protect the participants from harm, intrusion, or loss of privacy whenever possible (Fisher, 2012). Autonomy of participants was preserved, enhancing the validity of the study by increasing the potential for depth of description. Interviews were scheduled in private areas selected by the participants at times and durations convenient to them. Each participant was assigned a pseudonym. This link to identifying information was kept in a password-protected digital

file, available only to me, until the project was completed. This was done in case a participant wanted to remove information after deciding not to continue participating.

It was also critical that no aspect of the study disempowered the participants. One of the paradigms on which the study was based on strengths development in positive psychology, so there was no risk of disempowerment. APA Standard 3.06 (Conflict of Interest) provides a basic guideline against embarking on a research study when any other roles, interests, or relationships could lead to clouding researchers' judgment, impeding their effectiveness, or exposing the participants or site to any exploitation or harm (Fisher, 2012). For the study, the issue of boundary issues was brought up in the initial screening interview. If multiple roles appeared to be a problem between the candidate and me, I did not ask the person to participate.

Institutional review. Before making application to the Walden University IRB, I requested and received a letter of cooperation from the primary hospital's nursing research office; a draft of this letter of cooperation appears in Appendix D. This hospital found my Walden University IRB approval, but limited my study to nine or less nurses, rather than a variety of healthcare positions. The two participants who represented two other hospitals volunteered when they learned of the study, and did not represent their hospitals, so no further institutional review and approval was sought.

Data Collection

The typical data collection method for phenomenology uses semistructured interviews, involving participants as coresearchers. Although I brought an interview worksheet with open-ended questions and prompts (see Appendix E), the interviews

followed the participant's story without direct reference to those specific questions. The interview guideline questions were used to return focus to the interview.

Data Collection Procedures

The screening process for candidates based on participation criteria was conducted either by email or by phone, and was not recorded. During this process, I provided a brief overview of the study, and inquired about the candidate's interest in the study, in which department they worked, and for how long. In all cases, candidates became participants.

In the data collection interview, after a brief social conversation and restatement of the purpose of the interview and the study, we spent a moment of centered reflection. The interviews, which proceeded for an average of 47.5 minutes, were digitally recorded, with permission from the participants. I also took handwritten notes regarding the context and process of each interview, trying to be alert to bias and avoid it. Additional information was gained during the memberchecking process.

The phenomenological researcher, as primary data gatherer, needs to have self-efficacy in being with others, their emotions, and their issues (Ivey, Ivey, & Zalaquett, 2010). To be skilled in the data collection process of interviews, the researcher needs to follow the trend of the participant's thought, with little interruption, using additional probes in order to enhance the richness of the data (Ivey et al., 2010). I followed these guidelines in conducting the interviews.

Recording and Transcription

As noted above, the interviews were audio-recorded, with the participants' permission, as well as hand-noted. The audio-recordings and transcriptions were stored on a password-protected peripheral hard drive, and kept in a locked box, separate from the computer. Before transcription, I removed any identifying information. The audio-recordings were digitally keyboarded by a professional transcriptionist, who signed an agreement of confidentiality and nondisclosure. I had begun transcribing the first interview, done over the phone, but found the digital recording was not clear, and the transcription was taking too long. I asked a trustworthy acquaintance of mine, and she took on the project. Before giving me the transcriptions, she double-checked them against the recordings. I also checked the transcriptions against the recordings, and removed additional phrases and words which could be used as identification. These edited transcriptions were then memberchecked.

Three of the participants told me no changes were needed; the other four, particularly the participant who had been interviewed by phone, provided corrections and additions. These modified transcripts were entered into NVivo10 as cases. The raw data and edited transcripts will be kept for five years after the completion of the study.

In support of the transcribed interviews, my field journal provided additional insight into the content and process. The reflexive nature of this journal is part of the transcendental phenomenological process (Moustakas, 1994). Analysis of the specific language used also appeared in the field journal, as part of the interpretative process (van Manen, 1990).

Verification Process

As soon as the first participant was interviewed, I began transcription, data organization, and verification. This iterative process continued until after saturation of data had been achieved and verified. Each edited transcribed interview was delivered to the pertinent participant for verification, amendment, and addition. Once the reviewed data had been verified individually, NVivo10 was used to organize the analysis process, as discussed in the next section. An executive report, a summary of the findings, was prepared, and made available to each participant for further verification.

Data Analysis

Data Analysis Techniques

The analytic process was similar to ethnographic research in that the coding and study of interrelationships began when the first interview has been conducted, and was refined as the data was collected (LeCompte & Schensul, 1999b). Following van Kaam (1959, 1966), Moustakas (1994), and van Manen (1990), organization of the data began at the time of interview transcription. As I listened to the audio-recordings and coded the transcripts into NVivo10, I notated in my field journal trends and observations of the interview, as well as my own assumptions, biases, experiences, and theories regarding the phenomenon of resiliency to CF. This process, termed *epoché*, allowed me to bracket the phenomenon as experienced by the participants, separate from my own views. This approach was presented by Moustakas (1994) as a modification of models developed by Stevick (in 1971), Colaizzi (in 1973), and Keen (in 1975). This self-analytical process followed the same steps as the analysis of the transcripts from the participants. As part of

this process, I had a friend interview me, using questions from the interview guidelines.

A summary of this epoché can be found in Appendix H.

In the first stage of data analysis, horizontalization, I listed every relevant expression relevant to the phenomenon (Moustakas, 1994; van Kaam, 1959, 1966). These horizons were entered into NVivo10 as free nodes, such as empathy, burnout, support for compassion. The concept of horizontalizing is characteristic of phenomenological analysis. An expression qualifies as a horizon if it contains “a moment of the experience that is a necessary and sufficient constituent for understanding it” (Moustakas, 1994, p. 121). Rather than using the reduction and elimination process recommended by Moustakas, I coded every significant statement, or relevant horizon, giving each equal value. A cumulative value of overlapping or repetitive statements developed, as suggested by Giorgi (2006), under each node.

From this preliminary analytic process, meaning units were selected (Moustakas, 1994). This iterative process continued as more information was gathered from each interview (Creswell, 2007; Schensul, Schensul, & LeCompte, 1999; van Manen, 1990). I clustered these meaning units into common concepts or themes: these invariant horizons, or nonrepetitive, nonoverlapping statements became parent nodes. Using memos and annotations within NVivo, these parent nodes were accompanied with a synthesis of descriptive terms and phrases. As the analysis proceeded, child nodes were identified and brought into the hierarchy, headed by the parent nodes. As part of this development of free nodes into hierarchical or parent nodes, interrelationships between the nodes were

identified, using NVivo10. A hierarchical structure also occurred with relation to the interview questions and subquestions, as displayed in Table 5 in chapter 4.

Using “imaginative variation” I took various points of view to examine the textural themes and qualities in order to develop a structural analysis (Moustakas, 1994, p. 122). By varying frames of reference, reversing positions, changing roles or functions, I investigated “underlying and precipitating [components of the experience of each participant]. . . . The thrust is away from facts and measurable entities and toward meanings and essences; in this instant, intuition is not empirical but purely imaginative in character” (Moustakas, 1994, pp. 97-98). Consideration of invariant structures such as time, space, physical presence, relation of the phenomenon to the person, as well as interrelations with others in analyzing the participants’ responses developed into a structural description of how resiliency to CF was experienced. To aid in this phase of analysis I created various diagrams and charts, included in chapter 4, of the process by which emotions, thoughts, and behaviors react to the phenomenon of resiliency to CF.

A textural description and structural description of the phenomenon was created for each participant, as well as for myself. I combined these into two composite descriptions representing the group, one textural, the other structural. The final executive report (Appendix XX) was a combination of these two descriptions into a holistic view of empathic people’s resiliency to CF, accompanied with its interpretation.

Data interpretation. The earliest interpretations in the study, beginning with the analysis of the first interview, were accompanied by intentional consciousness of my own views, as part of the epoché process. The interpretation was modified and refined as data

gathering and analysis continued, in the tradition of qualitative research. One of the primary advantages of qualitative research is the inclusion of participants' multiple perspectives in data interpretation (Bennett, 1998a; LeCompte & Schensul, 1999b).

Once the data were gathered into composite reports, I used various theories of CF, empathy, and ecological theories of social network support in order to extract valid meanings. This interpretation style, based on the phenomenological methods of Moustakas (1994) and van Manen (1997), provided: (a) a description of my personal experiences with CF and people who do not develop it; (b) a list of horizons, significant statements from the participants; (c) a grouping of elements into meaning units or themes which emerge; (d) a textural description of the what the participants experienced or observed; (e) a structural description of how their experiences occurred; and ends with (f) a composite description and interpretation of the phenomenon. This composite description and interpretation included a set of propositions and a list of features or elements which were common to all points of interpretations, couched within an essay.

As the sample was limited to seven nurses, a frequency table was not pertinent. Because graphics can convey a great deal of meaning (LeCompte & Schensul, 1999a), particularly in showing relationships between elements, I created prototype models which indicate these relationships.

Use of NVivo 10 Software

Use of qualitative data analysis (QDA) software aided me in a number of ways, such as providing a single location for storage of data, and use of consistent coding

schemes. I have considered the possible disadvantages and limitations, beyond the time needed to become proficient in using the program. Being aware that some researchers use the QDA software to take shortcuts, or may become distant from their data (Bergin, 2011), I will remain true to the phenomenological approach I would have used without the QDA. I can avoid analytical pitfalls by running queries of the database as I progress from early coding to theme clustering, rather waiting for a mechanical data analysis with artificial results (Bergin, 2011). In qualitative analysis the researcher, not the QDA software is the analyst.

My choice of NVivo 10, a QDA software developed and supported by QSR International (QSR International Pty Ltd., 2010), is based on several factors: (a) NVivo 10 will read digital audio input from my interviews, and provide summary transcripts of each; (b) NVivo 10 will aid me in managing and organizing the data as I gather it, and will manage ideas that come to me in the data gathering process; (c) NVivo 10 will provide me many methods of reporting data, including graphs, models, and tables, based on varied querying modes I will use (Bergin, 2011; Leech & Onwuegbuzie, 2011). The summary transcripts of the interviews will be part of the analytic triangulation, compared with verbatim transcripts I will be able to create from the audio playback through NVivo 10.

Additional strengths of NVivo 10 include allowing me to import chunks of my literature review and create links between previous studies and theory with what will emerge in my study. This QDA software will provide me with flexibility in choosing which types of analysis are appropriate for data and research questions of my study

(Leech & Onwuegbuzie, 2011). The highest advantage NVivo 10 will offer goes beyond shortening the amount of time coding and analyzing, and providing highly consistent coding and analysis, avoiding the common pitfalls of noncomputer-assisted qualitative analysis (Bergin, 2011; Robson, 2002).

The qualitative analysis pitfalls include data overload, misjudgment in coding and grouping, and uneven reliability (Bergin, 2011). Misjudgment may occur due to the stronger influence early impressions may have, leading to resistance of later revision. It may also occur due to instances which confirm previously held beliefs, one of the reasons epoché is a critical part of phenomenology. Although NVivo 10 will be a useful tool for organizing information, I will need to be alert to the possibility of placing too much confidence in the QDA software, particularly in my coding.

Coding procedures. NVivo 10 uses the creation of various types of nodes in coding information. I will categorize these nodes as I read through the transcript summaries and verbatim transcripts. Free nodes, as yet unassociated with others, are the initial phase. Each free node may be a collection of references to a theme, location, person, or other item of interest (Bergin, 2011; Leech & Onwuegbuzie, 2011; QSR, 2010). For example, some keywords which I may use for nodes are CF, resiliency, empathy, and emotional contagion, or emergency room, palliative care, and cancer clinic.

In the next phase, tree nodes which are groupings of nodes (no longer free and unassociated) will be organized into hierarchical structures, showing linkages from a parent node to more specific categories, or child nodes. I will make judgments of pertinence and linkage before moving a free node into a tree node folder (Bergin, 2011).

Case nodes have attributes, such as participant type, or location, or other distinguishing factors. Relationship nodes show connections between two or more case nodes or items in the study, such as between resiliency to CF and a healthcare provision area. From these various types of nodes, matrices will be created, using a matrix-coding query. Each cell of the matrix will be a node used to further explore and code the data.

Analysis procedures. Analysis of the data may begin after the first interview, due to using NVivo 10 for organization of data. Various modes of query exist, which will allow me to probe the data as I gather it, identifying patterns which I might follow in gathering more data. Each query can be saved in the QDA, run again with the new data, with a tracked progression of results (QSR, 2010). In a 2005 paper presented at the annual meeting of the American Educational Research Association, Leech and Onwuegbuzie (2007) identified 21 qualitative analytical methods.

Constant comparison analysis, which examines and compares any type of input of data, is one of the most frequently used qualitative analytical tools (Leech & Onwuegbuzie, 2011). Constant comparison analysis was developed as a coding system for grounded theory research by Glaser and Strauss in 1967, but can be used for any qualitative research method as a systematic search for meaning. Deductive coding, where codes are identified prior to analysis, can be assisted by NVivo 10, which will also search for these codes already in the data. The QAS will also search inductively for codes which emerge, and abductively, seeking iterative occurrences of codes (Leech & Onwuegbuzie, 2007). This process is what most qualitative analysts refer to as coding, chunking, grouping by similarity, and identifying themes.

A second analytical tool which NVivo 10 can use is keywords-in-context (Leech & Onwuegbuzie, 2011). This method compares words which appear and after key words I will have designated. It is useful in identifying implied connections, and will be part of my hermeneutical analysis. Supplementing this, I will also use word count analysis to help identify patterns, to set usage values where pertinent, and to assist in maintaining analytic integrity (Leech & Onwuegbuzie, 2007). Word count analysis may be used to establish usage patterns of value-setting words, such as “many,” or “often.” As word count analysis may decontextualize the word, theme, or phrase, it can be misleading. It is based on the assumption that frequent use of a word by an individual indicates importance to the person’s view. Although I will use this NVivo organizational tool, I will view the results through the lens of my field journal notes regarding each interview, and question the results for significance.

Classical content analysis, instead of reporting emergent themes, can be used to count the number of times each node occurs. I will establish the coded nodes deductively, at the beginning of the analysis. This method is useful if there are many codes (Leech & Onwuegbuzie, 2007).

As part of the structural analysis I will use domain analysis, taxonomic analysis, and componential analysis. Domain analysis uncovers semantic relationships between nodes, such as antonymy (X is defined as negative of Y), comparison (X is defined in contrast or similarity to Y), and attributive (X is defined with regard to attributes of Y) (Leech & Onwuegbuzie, 2007, p. 568). The components of each domain in NVivo 10 are tree nodes. The reasons I will use domain analysis are to uncover relationships among

concepts, giving myself another way to triangulate my analysis, and to develop additional probes for later interviews.

Taxonomic analysis will help me understand the usage of specific words. Most people have different definitions of CF, empathy, and resiliency. Taxonomic analysis will show me the relationships of tree nodes within a domain, reveal branches or subsets, and how these branches relate to the whole tree (Leech & Onwuegbuzie, 2007).

Componential analysis is a more detailed examination of the relationships between words. Using matrices, with one dimension a “contrast set,” and the other “dimensions of contrast” I will be able to determine gaps in the information (Leech & Onwuegbuzie, 2007, p. 571). NVivo 10 will be a very useful tool for me, but in the analytical process I recognize I will be the analyst, not the software program. As a vital part of the triangulation process, I will return to the participants for verification of the textural and structural prototypes I have developed.

Verification of Authenticity and Trustworthiness

Credibility, or internal validity, can be damaged in a study if sampling bias or omission of point of view occurs. In quantitative research, reliability, validity, and replicability are the parameters of authenticity and trustworthiness, but using those terms in qualitative research makes little sense due to the research paradigms used (Williams & Morrow, 2009). To establish authenticity and trustworthiness in the proposed qualitative study, I shall be attentive to the integrity of data, maintain a balance between reflexivity and subjectivity, and communicate the findings clearly, as recommended by Williams and Morrow (2009). To avoid sampling bias, I plan to take time with the study, and

gather data until a saturation point occurs, with inclusion of diverse perspectives.

Providing details of the procedures I use will allow others to investigate the phenomenon with other populations. To further establish validity, I will use direct quotes, showing how data support my interpretation. Part of the validity of the proposed study will be based on the trust established (Creswell, 2007).

Triangulation in qualitative research reinforces trustworthiness. Gathering information from varied bases, rather than from a homogeneous group, will be one leg of the proposed study; memberchecking will be a second leg; the third leg of triangulation will occur in comparing structural and textural descriptions of the phenomenon (Davis & Paulson, 2011).

The reflexive field journal, described earlier, will add to the trustworthiness of the proposed study (Moustakas, 1994; van Manen, 1990). The journal will contain personal notes, describing my own answers to the questions asked in the study, my own biases regarding CF, empathy, and the phenomenon of empathic people not developing CF, as well as notes about the setting of the interviews, the facilities themselves, reactions to the participants, personal interpretations, and accountings of prior experiences with CF, and the role empathy plays in it.

Transferability, or external validity, of a study yields sufficient description for others to decide whether or not the study's findings are generalizable to other situations (Creswell, 2007). For the proposed study, the structural description of the phenomenon and detail of procedure should strengthen the possibility of replicability with other populations (Davis, 1998; Moustakas, 1994). The report of findings for the study will

describe the contexts in which the interviews occurred, as well as the reported experiences and observations. This will include the environmental and management factors, as well as the nature and relationship of the participants to the people they are describing.

External reliability cannot occur when concepts or data gathering methods are inappropriate for the group being studied (Schensul et al., 1999). The use of semi-structured interviews with open-ended questions is considered appropriate for phenomenological study (Creswell, 2007), and is a method with which all participants will be familiar, due to the nature of their professions. If there is any indication that the experiences reported by the participants are idiosyncratic to that group, this will be carefully documented in the study's report (Schensul et al., 1999). I will strive to maintain the clarity in definition of concepts, questions, factors, and elements at all levels, needed for both internal and external validity.

Gaining a full perspective of a phenomenon requires allocation of sufficient time; conditions may change, and attrition may occur. I will be wary of making premature conclusions, and continue to modify interpretations as new, conflicting data emerges (Moustaka, 1994; Schensul et al., 1999). The overall validity of the study will also be enhanced by checking the transcriptions for accuracy against the audio-recordings, and ascertaining I did not influence the responses and descriptions in the interviews. The confirmability of the study by people other than participants and myself is less easy to control without damaging confidentiality: the only audit trail available would be to compare the audio-recordings and transcriptions.

Supported by the literature (S. Smith, 2009), the phenomenon of resiliency to CF is a valid phenomenon to investigate. The reflexive nature of transcendental phenomenology requires that I be alert to all potential predefined or biased attitudes regarding the phenomenon, its components, the people being interviewed, and the facilities in which the study will occur, thus decreasing the likelihood of unreported bias.

Dissemination of Findings

Each participant will receive a copy of the executive summary report, as will each interested participating department. For any department desiring it, I will make a presentation of the findings from the study, and/or lead a workshop in resiliency development. At the conclusion of the project I intend to condense the study into an article, and offer it to a peer-reviewed journal in the healthcare professions.

Summary of Processes and Security Precautions

The steps to be taken in the proposed study, after approval by the appropriate IRBs are:

1. Recruitment: Before attending a monthly meeting of the Oncology Local Practice Council, to which I have been invited, I will talk with the coordinator for this meeting. At the monthly meeting I will make a brief presentation of the project, and request referrals to potential participants.

Using personal inquiry and the snowball method, I will identify and recruit nine participants. This will be done initially by speaking with nursing administrators or coordinators in various health areas: palliative care, cancer care, long-term rehabilitation, physical therapy, pain clinics, and long-term

pediatric care. In this initial phase, I will request referrals to people who might serve as key informants for the project. The potential key informants will be approached initially using email, phone, and in-person requests, over a period of two to four weeks. A letter of introduction (see Appendix C) will be used. Each participant will be asked to sign a consent form (see Appendix B)

2. Data gathering: During the recruitment period, I will schedule interviews with the participants, selecting sites which are recommended by the participants, usually at their places of work.

Each participant will be assigned a pseudonym. In order to be able to remove information should a participant decide not to continue, the link between participant and pseudonym will be kept securely until the project is completed.

Each interview will be audio-recorded. The interviews will last 45 minutes, or longer if the participant wishes. The audio-recordings will be stored in a locked box, available only to me.

3. Transcription: I will make a verbatim transcription of the audio-recordings of interviews. I will keep the original verbatim transcript stored on a peripheral hard drive in a locked box, with the audio-recordings. A second transcription, removing any identifying information, will be stored on a separate password protected flash-drive.
4. Analysis: I will begin this phase of the study after the first interview, rather than after all initial interviews. First, I will describe in my field journal each

participant, as well as the context of each interview. Using NVivo 10, I will enter the reduced transcript, with identifying information replaced by code, into a database, which will then be processed to cluster elements of data into themes and overarching motifs, leading to a textural description for each participant. Using imaginative variation, I will create a structural description for each participant.

5. Composite description: Combining the individual descriptions, I will develop a group composite of both textural and structural findings, followed by a holistic narrative which describes the phenomenon holistically.
6. Verification: Using in-person interviews, I will bring the composite textural and structural findings back to the participants for additional feedback and correction.
7. Revision: I will revise the textural and structural narratives, based on new input from the participants. This will lead to revisions of the composite descriptions.
8. Dissemination: If requested by participants, I will make presentations of the findings to the interested departments. Each participant will receive a copy of the final report.

Many articles have been written describing studies of CF (S. Smith, 2009). The majority of the studies have been done in medical settings, frequently by nurses, with the intended audiences being policy makers, administrators, and other nurses (Aycock & Boyle, 2009). For the proposed study, these will also be the primary audiences. As this

study may be preliminary to other studies, including a grounded theory study to develop a revised theory and model of CF in the health profession, I do not plan to disseminate the information widely until I have performed additional research.

The next two chapters will be completed after data have been gathered and analyzed. Chapter 4 will discuss the process by which data were generated, gathered, and recorded. I will describe how I kept track of data, as well as the use of my field journal. I will present the findings from the analysis, tying relevant discoveries to the individual research questions. In addition, if there are any discrepant cases or themes, I will disclose them, including the presentation of all salient data. In my discussion of evidence of quality, I will show how this study followed procedures which ensured data accuracy, so my study will have merit, trustworthiness, and credibility.

Chapter 5 provides a brief overview of why and how the proposed study was done, followed by an interpretation of the findings. I indicate the limitations of the study, where additional study might be done, as well as recommendations for action. I will present the implications for social change which the findings underscore. As part of this chapter I will also write about my experiences in the research process, my own biases, and any possible effects I may have had on the interviewing process and gathering of data.

Chapter 4: Results

The purpose of this study was to determine the essence of resiliency to CF among nurses. It used paradigms from empathy, emotional contagion, resiliency, and CF theory. The primary research question was: What is the collective essence of healthcare professionals' experience of resiliency to compassion fatigue? The secondary questions were: Research question 2: What distinctions and similarities do healthcare professionals experience between burnout, CF, and vicarious trauma? And research question 3: What qualities and characteristics do health care professionals experience as supportive to being empathic and yet resilient to CF?

This chapter presents the setting for the study, the demographics of the participants, the data collection process, and data analysis. I then discuss the verifiability and trustworthiness of the study. The remainder of the chapter presents results for each of the research questions, and additional information gathered in the interviews. The sequence of presentation follows the semi-structured interview questions, which are subquestions of the research questions (see Appendix E).

Setting

Data for this study was collected primarily at a teaching hospital in a northwestern city in the United States. Four other local hospitals were also represented: two participants worked at both the primary hospital and two other hospitals, and two worked solely at other hospitals (see Table 4 below). The interviews were conducted in places of the participants' choosing, and lasted an average of 47.5 minutes (see Table 5): Four

participants individually came to my home; two were interviewed in their offices; and one, the first participant, was interviewed by phone.

Personal or Organizational Conditions

The hospitals and departments represented by the participants did not place any organizational conditions on the interviews. The personal conditions which existed, however, need to be taken into account: I was taking opiates to combat severe pain, and I had low energy. If I had been in full health, it is possible deeper and richer material could have been elicited.

Demographics

Demographics were minimally of interest in this study. The participants' gender, age, ethnicity, and other biosocial characteristics were not relevant to this study, only their length of experience, and type of nursing placement.

Characteristics Relevant to Study

The seven participants were nurses with a range of from 25 to 40 years ($M = 31.6$) in nursing, working at least the past five years in their present departments. No gender-based differences were seen between the responses of the six women and the one man, who had retired the past year. Four of the nurses had worked primarily in Labor and Delivery. As this was the majority of participants, the study results should not be generalized beyond these participants. Their information, however, underscored how much that area of a hospital is at risk for the development of CF.

Table 4 presents the code name for each participant, and the hospital area in which that person worked. H1 refers to the teaching hospital, the primary source of data

collection. One person worked primarily at this hospital, but also worked some of the week at a second hospital (H2). Another participant worked primarily at a third hospital (H3), and some of the week at the teaching hospital. Two participants did not work at the teaching hospital, but at two different hospitals (H4 and H5).

Table 4

Demographics of Participants

Participant	Gender	Primary Hospital	Secondary Hospital	Area	Years in Nursing
L2	F	H1	-	Labor & Delivery	30
L3	F	H3	H1	Labor & Delivery	35
L4	F	H1	-	Labor & Delivery	25
P5	M	retired	H5	Psychiatry	30
A6	F	H1	-	Admin	36
A7	F	H1	H2	Oncology	25
O8	F	H4	-	Operating Room	40
Avg					31.6

Data Collection

Data was collected in several ways. The primary source was from semi-structured interviews, using the questions in Appendix E as a guideline. Seven nurses from various departments at several hospitals participated, as shown above in Table 4,. Additional data was collected through my observations and notes in a field journal, and through the participants' memberchecks of the transcribed interviews.

Locations and Durations

Table 5 presents the locations and durations of the interviews. Each participant had a single interview.

Table 5

Location and Description of Interviews

Participant	Date of Interview	Location	Duration	Quality of Interview
L2	9/24/12	phone	40.25	medium*
L3	10/11/12	my home	45.75	excellent
L4	11/3/12	my home	51.25	excellent
P5	11/23/12	my home	49.00	very good
A6	12/7/12	P's office	55.33	excellent
A7	11/20/12	P's worksite	48.00	excellent
O8	12/8/12	my home	43.00	emotional; good

Avg

47.50

*The quality of the recording was not good. The interview was not as deep as the in person interviews, however the transcription was enhanced later by the participant during memberchecking.

Recording of Data

In every case the participants agreed to have their interviews audio recorded. In addition I took notes in my field journal. The first interview, conducted by phone, was recorded by putting the phone on speaker phone and recording by digital recorder. As indicated above in Figure 5, the quality of the recording was not good, and the depth of the responses and interaction were less than when the interview was conducted in person. The participant provided more information during the memberchecking phase of data collection.

The six other interviews were audio recorded by placing a digital recorder on a surface between the participant and me. When these recordings were transcribed, the typist indicated where she could not decipher what was being said by placing brackets around what she thought may have been the words. During the membercheck phase, participants corrected these areas where necessary.

Variations from Proposal

The proposed study would have involved 9 to 12 participants in different types, levels, and areas of healthcare. Instead, only seven nurses were participants. The nursing research coordinator placed a limitation on participation of nine nurses, with no other

type of healthcare professional included. After interviewing the seventh nurse, I recognized I had reached data saturation, as I was not receiving significant new information.

A second variation from the proposed study occurred in the transcription of the interviews. After struggling to transcribe the first interview, I realized I would not be able to capture accurately what had been said. A trusted friend is a professional transcriptionist. She signed a form assuring confidentiality and nondisclosure, and transcribed the seven interviews, plus an interview with one of the experts who had guided my research. She checked each transcription against the digital recording for verification. I also checked her transcriptions against the recordings.

Unusual Circumstances

The day before my first scheduled interview I fell on my back, leading to a concussion and spinal injury. My doctors were concerned that I would develop paralysis from the waist down, and told me I needed to avoid twisting, lifting, or bending. Under their orders, I was home-bound for two months. During that time I was on opiates, making it difficult to think clearly, or to imprint short term memory.

Because of being home-bound, after the effects of the concussion were behind me, I made an appointment for a phone interview with the first participant. The quality of the digital recording was very poor, and the interaction did not have the depth it might have if the interview had been person to person. I discussed the situation with my chairman, and with the head of nursing research at the primary hospital. It was decided that if the participants wanted to come to my home as their choice of location, I could

proceed. Four of the participants did make this choice. The quality of their interviews was very good, and provided rich amounts of data.

Data Analysis

Process

After the participants had checked their individual transcripts and returned them, I digitally transferred them into case nodes in NVivo10. As I listened again to the recordings, and reread the transcripts, I annotated them with my field note observations, and coded them into a hierarchical set of nodes based on the interview questions. The process of coding, writing memos and annotations was tracked in NVivo10. I also kept an audit trail of my process in my field journal as new themes emerged. Included in the responses was information outside of my research questions, but supportive to the answers: personal history, the pros and cons of nursing, changes in nursing, the role of spirituality in their lives, and other themes. Each of these themes became a free node. Because my own words in the interviews frequently represented my own biases, I coded them into an epoché file (summarized in Appendix H).

After the initial coding into hierarchical nodes, I explored the nodes for word frequency, but did not find this useful for identifying themes. In reviewing the hierarchical coding of the interview transcripts, I realized I needed to refine the nodal distinctions. Where pertinent, I subdivided the nodes into child nodes (see Appendix I). Iteration of the reading and coding led to an identification of additional themes, and relationships between the themes. Rereading the transcripts, and using NVivo10 to add

notes to the coded material, I was able to distinguish subthemes, which I listed in various tables. In forming the tables, I was able to organize the results into meaningful units.

The analysis process described above was repeated several times. At the same time I made notes relative to the structural description of the participants' experiences, following Moustakas's guidelines (1994), determining what were the conditions which existed underlying the participants' accounts.

While rereading the transcripts I noted any differences between nursing departments, or between male and female nurses, but found nothing of significance. I also compared the individual transcripts for differences in language, using word analysis for positivity or negativity, presentation style, and emotion. While doing this, I followed van Manen's guidelines: (a) reflect on essential themes, the essence of the lived experience; (b) maintain a strong, oriented focus; and (c) balance the research context by considering both components and whole (van Manen, 1990, pp. 30-34).

Each pass through the data gave me more insight and depth about how the participants experienced resiliency to CF, and what they considered supportive. After compiling the results from the transcripts which provided the phenomenon from the participants' point of view, I used imaginative variation as described by Moustakas (1994, pp. 97-98) to develop mental images of what might have happened beyond what the participants told me. The purpose of this was to develop structural descriptions, and precipitating factors which could have accounted for the participants' experiences. This was useful in creating a structural composite model of the phenomenon, and how resiliency interacted with the development of CF (see Figure 2).

Discrepant Cases

One of the seven participants was included specifically because, before her interview, she had indicated she was experiencing either burnout or CF. As might be expected, her interview used negative language, and was emotional. In the interview she said:

[The operating room is] all I've ever done. And it's a lot of changes now, and – basically I'm burned out. I was burned out, which was why I went back to school, but I think now I'm *beyond* burned out. There's just nothing about it that I want to do any more. I mean, I like when I'm there, taking care of the patients, but all the other stuff that gets in the way . . . (O8, December 8, 2012)

Most of her other information overlapped with what the rest of the participants had provided about resiliency and compassion fatigue. Her description of experiencing burnout provided an important contrast to the phenomenon of compassion fatigue: she still had compassion for her patients.

Evidence of Quality and Trustworthiness

Following the recommendations of Creswell (2007), the standards of trustworthiness and quality of the study are based on: (a) the depth of my understanding of the principles of phenomenology philosophically and in research; (b) the clarity of the phenomenon of CF resiliency, and the presentation of this in an articulate and concise manner; (c) the use of trustworthy process based on recognized phenomenologists, Moustakas and van Manen; (d) the presentation of the “overall essence of the experience of the participants;” and (e) my reflexive attention throughout the study (Creswell, 2007,

pp. 215-216). The structural model of resiliency to CF (see Figure 2) is similar to resiliency in other areas, discussed in the literature review. The results and implications of this study are limited in transferability due to the small number of participants and range of medical departments represented. The structural description of the phenomenon and detail of process flow used in this study should strengthen the possibility of replicability with other populations experiencing CF.

The validation strategies used for this study included:

1. Prolonged engagement and observation within the nurses' working environments.
2. Memberchecking.
3. Clarification of researcher bias by development of an epoché.

Over the two years before this study, I observed nurses at work, and talked casually with them about the problem of CF. This led to the decisions shaping the study. During the study, I continued to observe and talk with nurses, confirming that CF was a definite problem, but that most nurses had built up a resiliency to it, after many years of work in their fields.

After the interviews of this study were transcribed, the participants checked their individual transcripts, editing the information and descriptions given. This heightened the validity of the study. Before, during, and after the interviews I took field notes on my own reactions and biases, as well as on the situations of the interviews. This helped me prevent potential bias in leading the participants descriptive answers, as well as introducing bias in reporting their collective responses. Additional credibility occurred

due to the level of nursing represented in the sample: two of the participants were in administrative nursing positions; one was a nurse manager at a secondary hospital.

During the study I maintained a balance between reflexivity and subjectivity, and was attentive to the integrity of the data. The interviews, with the exception of the phone interview, quickly established a trust between the participants and me, and the short centering at the beginning of each interview brought our minds more together and focused on the issues. The nurses represented diverse attitudes, experiences, and perspectives although only a view areas of nursing were represented – administration, psychology, labor and delivery, operating room, and oncology. I gathered data I found repeated concepts occurring in the interviews.

Results

The seven participants of this study told me highly evocative stories about their lives in nursing, their experience of CF, and their experience of resiliency to CF. Table 6 presents a summary of the number of participants addressing each of the questions in the interview guidelines (see Appendix E), and the total number of responses.

Table 6

Participation Summary per Question and Subquestion

Question	# Participants	#Responses
Research question 1	7	136
1.1.a Own experience of empathy	5	8

1.1.b	Empathy in others	5	8
1.2	Development of CF	4	13
1.3.a	Experience of CF in self	7	31
1.3.b	Observation of CF in others	6	29
1.4	Resiliency to CF	7	47
RQ 2		7	25
2.1	Comparison of CF to burnout, secondary or vicarious trauma	7	21
2.2	How empathy relates to CF	3	4
RQ 3		7	73
3.1.a	Empathic people who do not get CF	4	7
3.1.b	Are you one of these?	2	3
3.2	What helped or hampered resiliency	7	44
3.3	Changes desired in support	5	19

As an aid in comprehension for both myself and the reader, I have reorganized the results to the interview guideline questions (IGQ) into the following categories:

- A. Experiences of empathy, CF, and burnout, with discrimination between CF, burnout and vicarious trauma

IGQ 1: What is your experience of empathy personally and in coworkers in your workplace?

IGQ 2: What happens when a person develops CF?

IGQ 3: What are your experiences or observations of compassion fatigue?

IGQ 6: What is your experience of how empathy relates to developing CF?

IGQ 5: How is your experience of observation CF different from burnout or vicarious trauma?

B. Experiences of resiliency personally and in workplace

IGQ 7: Have you experienced people who are empathic but do not develop CF? Are you one of these people?

IGQ 4: What is your personal experience of resiliency to CF?

IGQ 8: In the workplace, what helped or hindered resiliency to CF?

C. Changes desired in the workplace to support resiliency to CF

IGQ 9: What would you like to see change in giving support to nurses so they can retain compassion and empathy?

Experience of Resiliency to CF

Empathy in the workplace (1.1). In Figley's 2002 model, empathy was the starting point of compassion fatigue. The distinction between empathy and compassion is part of understanding the participant nurses' experience of resiliency to CF. Participants (P5, L2, A7) assumed that nurses came into healthcare practice because of their empathy:

To me, empathy is to try to look at – listen to the person, try to understand them from where they're coming from, try to understand them in their world view and not put any judgment – from the way that I process, or of my world view. Try to put that aside. That's empathy.

I see compassion as active . . . Compassion is like *not* getting angry, not doing something – trying to do something that will help. Trying to not do something that will not help. (P5, November 23, 2012)

Several nurses (A6, P5) discussed their own experience of empathy, and its role in compassion:

I see empathy . . . when I try and understand where that person's coming from, from their perspective. . . A lot of times I don't know, so I have to ask questions. . . It's like, "How are you feeling about that?" And, "Tell me more about that?" . . . When you're not assuming how someone's feeling, and you're busy focusing on trying to actually learn it, you're not necessarily experiencing it yourself. You're truly understanding what that person's experiencing – if that makes sense? Not taking it on yourself. (A6, December 7, 2012)

All participants provided examples of compassion within their work. One scenario occurred in labor and delivery:

It was a woman who had traveled up from Montana because of some abnormalities with her baby. And the baby . . . would be taken directly to Children's. [The mother] had a C-section that afternoon. Anyway, they'd had a call to say this baby wasn't going to make it, and it may not live an hour. So usually we would discharge the mother. There is no facility to take a mother to another hospital – but she's fresh C-section, had duramorph on board, which meant she had to be observed closely for 24 hours as she was at risk for a respiratory arrest.

There's no way we could [discharge her], but the charge nurse, the doctors – everybody in the facility said, "We have to get this woman to her baby." She had not held her baby. She hadn't seen her baby. This is not in the rules, it's not in the budget but we have to make it happen. So I was asked if I would go – because there were a couple of people that were a little nervous about that. So I said, "Yeah, sure." So did all the phone calls and pharmacy pulled out the stops to do what – an hour's work in ten minutes because AMR was on the way, and hand delivered some drugs to me, and I signed them out and so-on. So I went over, spent a couple hours.

When we got there the baby was already being operated on and had a tamponade. They cracked its chest in NICU. So it lived for her to see. She got to spend about an hour and a half with the baby . . . They [Childrens] gave me a little waiting room that I reorganized [as an adult patient room]– all the furniture, the fish. The family on one side and her stretcher that AMR had left me. . . . It was interesting to spend time with that family – very close, very supportive family. And [the mother] got to spend some time –they all went in one by one and spent time with [the baby]. And I . . . got her back to [the primary hospital] at about two o'clock in the morning, passed her over to an ante-partum nurse to look after. (L3, October 11, 2012)

The nurse then went immediately to take care for another patient who had just been triaged in the emergency room, another case requiring a great deal of empathy and compassion.

In contrast to empathic healthcare professionals, one nurse described people who seemed to have little empathy:

I've definitely seen some people come into the field that . . . I wouldn't necessarily think of . . . as empathic people when they're *in* the [patient's] room . . . much more process [-oriented]. I've had a number of co-workers that have come into nursing as a second career, and they've started out in the business field. And to me that just seems – you have to have a different type of personality. . . I also know that they must be sharing something with their patients they're not sharing with us, because the patients that – when they would come in they would ask if that nurse was on, and wanted to have them caring for them, so – . (A7, November 20, 2012)

L2 described a coworker who was very unkind to her patients: With no thought of how the teenage new mother would feel, the coworker went into the new mother's room and asked, "Is your husband coming?" And of course, the patient was not married, and felt badly about that.

I think this woman – I think she has a lot of pain in her life. You know, when you talk to her, she screams out about – it's almost like . . . she embodies pain that she hasn't dealt with. So for instance, she immigrated to the U.S. . . and she's been bitter about being here. She's married to somebody who's a researcher, and has kids and – You know, I just picked up the feeling that she feels like her husband doesn't attend to her needs, and she should have never come to the U.S. And her life has been wasted here, and now to go back – everything will be different. So

it's like she is unkind to her patients in the same way life or family has been unkind to her. She seems to live the unexamined life...and replicate her traumas on others. (L2, September 24, 2012)

Another nurse described coworkers who seemed to have empathy, but were not able to pull away when they should have. L3 said she had seen people who had so much empathy they were crippled by it: "It's sympathy [really], and it cripples them in their life" (L3, 10 November 2012).

Healthy empathy. The participants' sense of healthy empathy coincided with mine: "One of the definitions of empathy that I really like that it's an ability to see the other person's reality – and feel it – but also to know the difference between that person and yourself" (personal communication with L4, 3 November 2012). This was seconded by A7: "You not only experience the other person's reality, but you *realize* it's the other person's reality."

In order to have healthy empathy, "you have to be very reflective about your own life before you can have empathy for somebody else" (personal communication with L2, 24 September 2012).

I think we all bring our experiences into that, though. I mean, if you've personally lost a baby . . . it's harder to be healthily empathetic with someone. You know, . . . because my mom died ten years ago, . . . I'm better able to help people understand what their mom's death means to them. I'm never afraid to ask the questions because I know, really, people do want to talk about it. [It's just that] people are . . . afraid to ask them. So I do – and often we have good conversations

about that. But when I was so close to my own mom's death I couldn't separate— Talking with someone about it, I could just feel myself getting, just right down there in that [hard place]. (A6, December 7, 2012)

Being empathetic is a good thing, she continued, even when it led to her own tears. The key part of showing emotion while in the presence of a patient is somehow to let the other person know “you don't have to take care of me because I'm crying” (personal communication with A6, December 7, 2012).

It is a mix, and it's being able to be confident that you can go back and forth between being able to disassociate - that boundary is still there, intact. By distancing – I mean, integrating – it seems to me a tremendous boon. In other words, it's *healthy* empathy, as opposed to – it could be negative. (L4, November 3, 2012)

How empathy relates to CF (2.2). Three participants (L2, L4, O8) described their perceptions of how empathy is part of compassion, and therefore part of CF, but not part of burnout, except that burnout can heighten the risk for CF:

I think that in addition to having empathy and compassion for my patients, which I do, part of doing a really good job of taking care of them when they're in probably one of their most vulnerable states . . . A big part of that is also having empathy and compassion for co-workers and that gets harder for me, being burned out. (O8, December 8, 2012)

Another participant discussed the relationship between empathy and CF by comparing the differences in empathy levels between homogenous and xenophobic communities:

Sometimes when we take care of everybody except for ourselves, we tend to be a little bit – I think we get lost in that community; we owe the community, or we do for the community. . . . It's much easier for a homogenous community, because everybody else is like us. If you put difference in the community, so some people are – whatever – striped, and some people are dotted, we're not going to like the people who are different than us. This is how "Othering" occurs and when we "Other" people, if we are fearful, we strike out at the "Other" out of fear obviously, then not compassion. (L2, September 24, 2012)

The participants, in general, believed nurses were empathic, and this was why the profession of nursing had such a risk for CF.

Experience of CF (1.3). Six of the seven participants had experienced CF at some point in their careers. The participant who never had CF had avoided it early in her career by understanding which nursing areas would create problems for her: "When I was deciding on what career to go in , I don't think I could have been effective when I had a three-year-old at home – working a pediatric unit with a three-year old. It's like, I knew better than that" (A6, December 7, 2012). She also ruled out nursing in a burn unit:

Patients stay in the burn unit for – I honestly don't know. I haven't worked there. . . . It's so –you're causing pain to patients as you're caring for them. It's often a unit that people *don't* go home from healthier than when they came in, necessarily. There's a lot of patients die there. It's not death that's the issue [for nurses]. It's the difficulty of causing pain. And that's just a unit where I don't think that I could be very effective in. (A6, December 7, 2012)

Observations of CF. The participants provided rich descriptions of their observations of CF in others, summarized in Table 7. None believed that CF was gender-specific, but that it could occur more frequently in certain areas of nursing, and to specific types of personalities. The development of CF was outlined: The daily routine and stress leads gradually to exhaustion; the nurse will not admit anything is wrong; and the nurse disassociates from situations at work. Then a triggering event creates a problem (A6); the nurse is called before the board (A6, A7); the nurse may request a change of area, or leave nursing (A6, O8). Or worse. One nurse (who asked not to be identified, even by code) had considered jumping off a bridge. Her supervisor interceded, told her she was needed at work, and she simply had to toughen up. She complied, as best she could.

Table 7

Observation of CF in Others

Characteristic	Participants who mentioned this
CF is not gender-specific	P5, A6, A7
Certain areas are at risk for CF	L3, A6
Certain personalities are at risk	L2, A6
Gradual depletion and increase of fatigue	P5, A6
Lack of self-awareness regarding CF	L4, A7
Disassociation from situations at work	L2, A7

Emotions are completely frozen	P5
Emotions are labile, feeling crazy	L2, L3, L4, O8
Difficulty interacting with people at work, at home, and patients	L4, O8

Changes in what is expected of nurses, as well as new attitudes about nursing from the new generation, may effect risk of CF:

I think that . . . just trying to stay human in a very dehumanizing environment – If I could say one thing about compassion fatigue, for me, it’s just all the forces that are causing [nursing] to be less human, are causing a huge toll on nurses to still be the nurse they want to be, and give the care they want to give. (L4, November 3, 2012)

Expectations which the nurses have may also effect risk of CF. The types of patients the nurse expected to work with may be different. For instance, coming into labor and delivery, one expects joy and celebration; one does not expect to face grief and loss:

The reality in an academic medical center is not – I mean, we move most of our normal births up to [another] Hospital. So our nurses here really went into Labor and Delivery to help moms do normal deliveries. . . . Nine out of ten of their births are, the babies – 28 weeks and go into the Neo-natal Intensive Care Unit or, “We’re so sorry but we – you have a choice about terminating your pregnancy, and how are we going to work that through with you?” or, you know, that’s the kinds of things that they’re working with. And, yes, it’s a very different – So

that's another thing I think about compassion fatigue is – depending upon what your expectations are, when you're not doing something you expected to be doing, or your family isn't [the kind you expected to be working with].

It's more a unit by unit situation. And compassion fatigue, as you know, isn't just about people dying. ... I think any loss is – You can go through all the same things Kubler-Ross tells you all about: denial, grief, and all that stuff. So it's – the areas that I work in are rehab – those patients aren't dying but they are suddenly having an incredible change in their state. They're paralyzed, they're – even what you yourself [referring to the interviewer] have gone through. . . I see nurses *totally* lose themselves in their patients when they work on the rehab units. Psych, the same way. And the – well, just having a baby who now has Down's Syndrome, or now has – is going to have learning disability because they were born 27 weeks premature and lost their eyesight, with retina [hard to hear] premature – any of those kinds of losses. Or – even just loss of what your expectations were, for what they care about and love. Yes, so I think that those are all other ways that – And when people are tired, themselves, I think that they're – I think having that balance. I see most of it in night nurses. (A6, December 7, 2012)

Participants commented about certain personality types who seemed more at risk for developing CF. People who were unable to view themselves realistically were described:

One of my co-workers was – she would come into work and it was almost not pleasant to be around her. And she – and most of it was not because she was being catty, or being negative. It was more just that – again, you’d just look at her and feel like she was just at the bottom of barrel. You would talk to her and, “No, no, no. I’m fine. I’m fine.” . . . People who invest all of their time in their job and in their patients, and go home at the end of the day and don’t have anything to take their focus off of that – are probably more the problematic people. (A7, November 20, 2012)

People who frequently blur boundaries were another group at risk:

I don’t think they realized they’re not being the kind of nurse they should be. . . . The person who has trouble keeping and maintaining their own boundaries has difficulty in *not* getting compassion. It doesn’t have anything to do with resiliency. It’s a question of setting up what they consider a screen so they won’t get compassion fatigue, but it’s really artificial. There’s really not a heck of a lot they can do except change the way they attach to people. (L2, September 24, 2012)

The risk for CF increased for people having problems and trauma elsewhere in the nurses’ lives:

And these single moms – if they have a lot of trauma in their lives already, it’s difficult for them to even *notice* they’re having problems, and then find anybody else to help them or get what they need. . . . So then they bring it to work, and then they want to find it either in the patient, which is not great, the family or their

co-workers, or all of the above. So that's the enmeshment. I see more of that [at another hospital] because it's a little community, and everybody knows everybody. It's a lot different than town where you sort of get along and move on. You know, you need to – if you can't cut it you're out the door, basically. There's not a lot of – It's not that we don't care for each other, but it's much more – You've got to be on top of your game. We say, "Hi. How are you doing?" and we really are moving on. We're not stopping to find out for sure. (L4, November 3, 2012)

Development of CF (1.2): Daily exposure "to loss – loss of expectations, loss of life and limb, whatever" contributes to the development of compassion fatigue (A6, December 7, 2012). Compassion fatigue comes from "having to face situations in which compassion is required, as a professional, every day, hour after hour, minute after minute, every single day. And after so much time, you're going to become fatigued" (P5, 23 November 2012).

Situations rise which demand compassion, not judgment, and can cause mental conflict between the rules, ethics, and humane action:

I think it's getting to the heart of what that patient's asking and needing you for, and it may have *nothing* to do with why they're there. It may have everything to do with who they are and how they got to where – how they got that way. This woman, she just wanted her darn arm-board released so she could get her baby up and kiss him. And nobody would help her, and she was beside herself.

She was so primal at that point, and I just said, “It doesn’t matter if you might hemorrhage – because your placenta’s still in. It doesn’t matter that you’ve been incontinent all over the bed. It doesn’t matter that we need to go to the OR and help get this placenta out. It matters to you that you kiss your baby, so we’re going to take the arm-board off.”

And that nurse was so traumatized by the whole scene that was presented in the hallway that . . . she just couldn’t do anything. And at that point she needed to be removed from the care because she wasn’t helping at all. (L4, November 3, 2012)

The high risk areas of nursing, such as psychiatry, can be “a pressure cooker situation . . . and sometimes [staff] don’t really handle the pressure well, . . . they start fighting with each other . . . rather than trying to deal with what’s going on here” (P5, November 23, 2012).

Negative interactions among the staff can increase the stress of nursing (P5, O8). If a nurse decided to be in direct service work, but the pressure from other staff on the team became too high:

[Many] would leave the field . . . or take administrative jobs . . . or secretarial stuff. . . .People don’t like to admit that they’re compassion-fatigued, or whatever they choose to call it. It’s not an easy thing for people to admit . . . or accept. . . .In medicine generally there’s always the, like, ‘Let’s get it done’ – right?” (R 5, November 23, 2012)

The development of CF is gradual until a triggering event occurs:

. . . Like give an overdose of a drug, or whatever . . . that's often when they make that decision, . . . "I just can't go on like this." . . . [The] triggering event . . . could be something personal. . . . But when you have an event that just stops you in your tracks and suddenly you're before the nursing board because you've administered the incorrect dose of a drug or someone has died because of it, or you had the wrong instruments and something happened – any of those things that can happen to people, *especially* when they're tired, that's more of where I see it.

We talk about crashing, but you know, you don't crash. . . . I think fatigue builds and you don't even realize [it]. . . . [You think] you build up resistance to it and you can deal with more and more of it. (A6, December 7, 2012)

Personal experience of CF (1.3). The poignant description by six of the seven participants who had experienced CF personally (L2, L3, L4, P5, A7, O8) emphasized the enormity of developing CF. A6, who never developed CF, thought she had narrowly avoided it during her first year of nursing. Some nurses who had also experienced burnout (P5, A7, O8), made a distinction between how CF and burnout felt. The symptoms of CF which have been catalogued in the literature were also presented by individual participants in this study, as seen in Table 8. Many of the characteristics presented in their observations of others were echoes of their own experiences.

Table 8

Personal Experience of CF

Characteristic	Participants who mentioned this
Physical:	
Exhaustion physically and mentally	L4, P5, A7
Burned out, in addition to CF	A7, O8
Behavior:	
Being inattentive	O8
No longer being humane	L4, P5, O8
Showing artificial compassion	L2
Emotion:	
Boredom with work	P5
Desire to pull away from dealing with people	P5, A7, O8
Raw emotion and frequent crying	L2, L3, L4
Depression and numbness	P5
Self-judgment:	
Feeling stigmatized by admitting weakness	P5
Having difficulty admitting the condition of CF	P5, A7
Feeling incompetent in providing care	L2, L3, O8
Feeling of failure	O8

Feeling trapped

P5

Wanting to quit

L2, L3, L4, P5, O8

“To me compassion fatigue is a point where it becomes cumbersome to be empathic, and you start feeling yourself pull away. . . . You just can’t make those connections anymore” (A7, November 20, 2012). The physical aspects of CF presented were: feeling dragged out, impossibly exhausted, and unable to cope with the physical requirements of the job. No one mentioned lowered immune systems, although the literature suggested this was a characteristic of CF.

Differences between CF, burnout, and vicarious trauma (2.1). Several participants used the terms, burnout and CF, interchangeably at the beginning of the interviews, but then gradually made distinctions. For example, O8, who identified herself as having burnout, then later as having CF, said, “I think with burnout, that when I would have a break or a vacation, that would renew me and refresh me. And now nothing does.”

“And that’s why you say you think you have compassion fatigue, because it’s a continual –?”

“Continual. I don’t want to go to work. And I’ve just had 12 weeks off and I thought going back would be okay. And I’ve been there two weeks and I’m –,” she sobbed.

Only one participant, L4, knew the term, vicarious trauma: “Yes, I’ve seen that. . . . It’s more common [in the northwest island community hospital]. It’s more visible.” At the primary hospital “they put the mask on a little more.” She did not, however, draw any

distinctions between CF and vicarious trauma. Another participant said she tried not to put labels on anything like burnout, CF, or vicarious trauma.

Several participants presented a clear separation between burnout and CF:

I think burnout can be boredom, it can be . . . many different factors, right. You just – you’re running all the time. You’re exhausted. You’ve worked ten days in a row. I mean, you’re just feeling numb. And then you shut down and you’re unable to – So I think of burnout more that way. Where as compassion fatigue is truly much more on a relationship level, and personal energy, that you just feel like you don’t have – You see people put a lot of energy, but I still think they’re carrying CF. They’re still [making the motions] . . . And they sometimes feel like they cannot – Well, again, I’ll use what is most familiar to me – the Labor and Delivery or the NICU is, you just – You can’t take care of one more baby that’s going to die on that shift. You know? It’s *not* that you’re not coming to work.

(A6)

A7 had experienced both burnout and CF, and made a clear separation between the conditions, as well as where they overlap. From her point of view, burnout was more serious than CF, and required a complete change. The similarity between CF and burnout was the need to draw away from work and personal connections. As with others I interviewed, the period where she experienced either burnout or CF was about a year and a half after she began nursing in oncology, in a step-down bone marrow transplant oncology unit.

To me the compassion fatigue is, if you identify it – If you’ve identified that you’re *getting* to that point, it’s – the compassion fatigue is when you feel yourself starting to draw away. You’re not getting the reward in your work anymore. You’re getting – it’s fatiguing to be there, and you’re feeling like you’re just having – You’re getting up in the morning and starting to go through the motions, but you’re recognizing that that’s happening. As opposed to many times – The one time I’ve been burned out – has really been where I just – I don’t even recognize that I’m there. I’m really kind of – I’m going to work, I’m going through all the motions but, you know, my co-workers are noting that I’m not involved any more, and that I’m just kind of there. So they could be just different ends of the same spectrum, but it’s – the compassion fatigue piece I have seen more as, I have an ability to maybe draw myself out of it. Whereas once you hit that burnout you’re kind of – you need to make a change. And that’s actually what I did when I hit that stage. I went and traveled for five months and worked on a surgical unit to see if I maybe should be working in a different field. (A7)

L2 said, “I think of burnout as little bit more . . . political. It’s like being tired of having – I’m tired of not being able to effect any change efficiently, or having very little authority to effect change. Burnout is like dealing with the system. . . . You know, I have a lot of responsibility but very little authority to change anything. Whereas, I think compassion fatigue is like, you just get tired of caring, or taking of people.”

L4 considered burnout to be “when you’re so desperate, it’s almost too late at that point.” CF, on the other hand, was “all the forces that are causing [a person] to be less

human, [and] causing a huge toll on nurses to still be the nurse [sic] they want to be, and give the care they want to give.”

Empathic people who do not develop CF (3.1). A6 discussed the reasons behind the many people she knew who were empathic, yet did not develop CF: “A couple of them, probably including myself, have a very strong spiritual foundation, or background.” Having a strong family background, and following “your heart” you’re your choice of professional area were two other reasons she gave.

A7 also knew people who did not develop CF, although they were empathic:

I could generalize and say maybe they’re people who come in and do their job, and then go home. And it’s not like they’re not empathic, but they are people who are able to – There are people that are able to turn off work when they go home, and whether it be from the time that they walk out the door, or from the time they walk in the door at home --

I asked where these people learned how to make this separation, and A7 responded:

I don’t know. I guess – One of my co-workers was talking about a book she was reading . . . just recently that was talking about differences between men and women. And her – what she was relating – and it was how women become successful in a male-dominated field. And they said some of the characteristics of women who were in top CEO positions in business areas are very similar to men in that they don’t have – They have work relationships with their co-workers, and they go home and they have their family life. And when they are at work they

don't talk about home, and when they're at home they don't talk about work.

[laughs] And it actually amused me because I had gone home and had a conversation with my husband about something that had happened at work, and he looked at me like, "What the heck?" And I realized that I can tell when he's having a bad time at work, but he never talks about it when he comes home. And it's the exact – I think there's something that is just in us that allows us to turn off those switches.

The comparison between generations, those in the "sandwich" generation who are part of "an aging work force . . . [who] are struggling. And they're just physically having a harder time, and just getting tired of the twelve-hour shifts, and taking care of [patients] that have way more complex issues" (L4), in contrast to a new generation of nurses who who seem to have a less compassionate demeanor at work. Five of the participants (L4, P5, A6, A7, and O8) spoke about this new generation. "They know it's going to be a good wage," said O8. "It's going to be something they can do, not because they really wanted to take care of patients. So they're missing that caring or compassionate part." Only one (A6) of the participants identified herself as an empathic nurse who had not developed CF.

Experience of resiliency to CF. The participants discussed resiliency in general, as well as resiliency to CF. Table 9 presents a summary of attitudes, behaviors, and self-judgments considered important to resiliency. Aspects at work which reinforce or hinder compassionate care and resiliency are summarized in Table 10.

Characteristics which supported resiliency. Self-awareness, or mindfulness, was considered a key component of resiliency. This self-awareness, however, needed to be realistic and healthy, with the ability to separate self from other when necessary, and balance care of other with self-care. Being aware of the choice involved in attitudes and decisions was stressed.

Table 9

Characteristics supporting resiliency

Characteristic	Participants
Attitude:	
Love your work, find joy in it	L4, A6, A7
Know how to live a meaningful life	P5
Learn how to cope with own pain	L2, L3
Change point of view regarding perfectionism	L3, A7
Prioritize and place values on actions; identify what you cannot change, and what you can	L2, L3, L4, A7
Be persistent in getting through stress	L2, A7
Be accountable	A7
Keep a sense of control of making choices; carry resignation letter with you	L4

Self-judgment:

Self-monitor; integrate conscious and unconscious	L4, P5
Recognize separation of ego and other	A7
Transfer feelings of worth to abstract; not get emotionally attached to patients	L4, P5, A6, A7
Do not seek strokes from patients	L4
Behavior:	
Use physical exercise as a way to cope with stress	L4
Do something else, or focus elsewhere	A7
Balance self-care with care of others; balance time	L2, O8
Meditate	P5, O8
Touch into spiritual energy	L2, L4, O8
Learn from more experienced colleagues	P5
Find your niche at work	P5
Try to separate work stress and personal life	L3
Find support for work stress in personal life	L4
Develop a strong support group	L4
Get therapy	L4
Limit exposure to stressful situations	L4

Development of resiliency in early life. Familial support early in one's life, as well as in the present, was an important part of the development of a resilient nature, according to one participant:

So I don't know if it's necessarily a personality thing as much as it is maybe an accountability. And that could go back to the familial support or – Is it the familial support or is it the teaching of morality and ethics, and the understanding of – I am accountable for my own actions. (L4)

A traumatic upbringing can also help a person develop resiliency, although this possibility may have something to do with genetics. In response to my asking why some people do not get CF, L4 said:

I think a lot has to do with genetics, and your upbringing, and what you bring to the field of nursing. . . . I just have had so much exposure to so many things like this. And I was raised in a kind of traumatic family myself. We had ten kids and an alcoholic father, and that tells you a lot right there. And I think of all the ten kids, I was seen as more able to hang on, to be there for everybody, not to enable or enmesh but just to kind of survive it, but help them get through. . . . I tried not to take that on, but I'm still the organizer – kind of the same role I do in my jobs. (L4)

A combination of persistence, spiritual energy, and knowledge of effective coping strategies for dealing with one's own pain strengthened one participant's resiliency:

You have to be very, very persistent. You have to *know* what your values are, if you're going to be resilient. You know, this is odd but – for *me*, one of the things that happened is having a spiritual experience as a child and knowing there's a spirit greater than myself. And that experience, although I knew it would *never* mean anything to anybody else and probably nobody would believe me, that got

me through some very difficult situations and I always, always knew that there was something greater than I. I don't subscribe to any religion, but . . . that experience was more real to me than my own hand! (L2)

Cultural support can be another factor in resiliency, not only in support of spirituality, but through a focus on community rather than an individual.

Families stay together, and [there's] a lot of socialization and community, and the kids all know [each other and the adults], . . . and everybody's just there together. . . . People have fulfilling lives. They feel supported. They feel like people know who they are personally. They're not using their work or their relationship with their patients to have [who they are] expressed.(A6).

Attitude. Mindfulness, being self-aware, and knowledge of how to live a meaningful life were traits most of the participants (with the exception of O8) thought important. Loving your work, or at least finding joy in it, was part of the equation, one that could be strengthened over time:

Who knows, maybe I've gotten better at avoiding compassion fatigue because I'm putting less of myself out there, because I've found a different way of rewarding myself. You know, maybe I don't need that relationship with my patient any more. Maybe I just need to know that I did my job well. And is that something that's grown over the years? Absolutely. . . . But I think that might be identifying what is valuable for you in your job, and then taking pride in that. . . . Maybe this is a characteristic of resiliency, of being able to recognize – and being able to

separate yourself from how you do it. What is a job well done? And that it's not about you. (A7)

The joy of knowing you have done the best you can cannot be present without changing your criteria for being perfect, and placing your values carefully (A7).

Identifying what can be changed within a situation, and what cannot, reinforces a sense of control, a necessary part of resiliency (L3, L4, A7):

If I go to work intending to do everything I can, I should be able to do basic safe care for somebody. I can't change anybody's life, you know, and I'm there for that particular shift. I can let that go. But when I know that people aren't getting safe care, I can't turn around. So I actually – in that case I did channel [that attention] into something else. (L3)

One participant said she was able to maintain a sense of control by keeping a letter of resignation in her pocket. (L4) Another suggested using the serenity prayer:

The stuff that comes out of work that makes us want to give up – It's not worth our attention. . . . God grant me the serenity to know the things that I cannot change. That's not worth your attention. Just keep going on. Don't let it hurt you, you know? [We have to figure out ways to cope] with our own pain so that we don't replicate it in our patients. (L2, September 24, 2012)

Self-judgment. Self-awareness, as in mindfulness, helped six of the seven participants in strengthening the separation of self and other, and in not seeking positive strokes from patients. Part of training in nursing is learning not to get emotionally attached to patients, yet be able to be compassionate (L4, P5, A6, A7). Self-monitoring is

a skill which can be taught, and was helpful after people had developed CF to avoid developing it again (L4, P5). This integration of the conscious and unconscious senses of where your body, mind, and spirit are was part of resiliency not only to CF, but to all stress in one's life.

If you can be more conscious . . . you can actually be more compassionate. . . .

The main focus of my meditation would be to let stuff waft up from my unconscious – because I know whatever I'm thinking about, it's being worked on even though I'm not conscious of it, in my mind. So I try to let these things waft up and say, "Oh, wow! I really think that, huh?" [Laughter.] But at least, then, you know it. Then you can do something about it. (P5)

Placing judgments of self-worth on something more abstract also helped be resilient, rather than seeking positive reactions from people in the workplace:

Mostly, I found for me it was like, taking the time to quiet my mind, to meditate, to re-affirm the task I chose to do, and to stay . . . positive about it, find value where I could. And then I realized that – really, what's happening here is that maybe what's so – maybe what's really important is not how a person reacts to me but how I react to the person. So I started looking at it that way for several years. (P5)

Behavior. Being self-aware of behaviors is another way to strengthen resiliency. Catching yourself paying more attention to something or someone in distress, and then refocusing is a cognitive behavior which helped all the participants. This could occur

during meditation (P5, O8), touching into spiritual energy (L2, L4, O8), or simply doing something else, if possible:

When it happened again, I could feel myself dragging as I was coming into work. It's like, "Okay, I need some time off. I need to find a way to refocus." Normally what I've done – I've had probably about eight different roles or job types in nursing since I started, and I usually at that point in time get involved in something else, so it takes me outside of my job. And most of the time it's fairly – it's professional involvement. But at one point in time I got more involved in our local oncology nursing society chapter, and started working on education. At another point, "Oh, I want some more education – I'm going to go back to school." Or, I got more involved in our national chapter. Or, I also volunteered for Campfire and I started teaching CPR classes for them. So it was giving me some sort of ability to utilize my professional skills without having to pour more into work, so it then made a – I think what I was finding was that I was trying to get something else from work that I wasn't able to get at that point in time so I had to go find it somewhere else. And by separating things, then I was able to just say, "Okay, I'll figure out where to go and can kind of rest through it."

Balancing time spent giving care to others and giving care to one's self was a critical part of resiliency (L2, A7, O8). Outside of work, using physical exercise or getting out into the natural world was very helpful in coping with stress:

That's how I cope – through physical outlets. . . . And fatigue – just from tiredness, from shifts, even – You know, doing the night shift, too. If you wake up

and have to think, oh my God, I'm going to have to work tonight, and how am I going to cope? Instead of getting up and going out and actually walking around Green Lake – and the endorphins will keep you going. You know, because you've done something for yourself, in the sunlight. And then there's all the sad stuff and everything else. You can go on. (L3)

Limiting exposure to stressful situations was another behavior adopted by a participant (L4). Another participant decided, in order to cope with too much stress in the overall workplace, it was important to find a niche:

For me, when after I got burnt out, my niche was to work on the night shift for several years, because it was less – you know, there was less pressure from administration and from protocol and all that – and politics. . . . Just as much pressure from the patients, yes – but less administration around. (P5)

Developing a personal support group was another behavior suggested. This might include a therapist, but should definitely include friends and family (L4). The separation of stress in personal life from the stress in the workplace could be another way to strengthen resiliency (L3).

Workplace factors. In the vivid descriptions of the nursing workplace which all of the participants provided, positive factors reinforced resiliency to CF, while negative factors lowered it, as seen in Table 10. Finding joy in the work of nursing was one of the positives mentioned (L4, A6, A7), but sometimes, when interactions with colleagues in that area were negative, this was not sufficient reason to stay in that particular area of nursing (O8).

Working at a highly rated hospital where research and teaching are cutting-edge may have both positive and negative results for nurses. The expansion of knowledge and breadth of experience strengthen one's resolve to stay and find a resiliency which helps get through the stressful situations. The negative side of this, however, can be an emphasis on process, rather than on compassion (L3, O8).

In general, in-service training as well, as learning from others' experience, have helped support resiliency:

We actually did have several courses . . . [but] that was a long time ago, . . . much closer to when I entered nursing – in how do you set boundaries, how do you care for people, how do you care for yourself while you're doing that. And recognize when you're getting into trouble with [boundary setting]. (A6)

Table 10

Elements in Workplace Influencing Resiliency to CF

Positive	Negative
Learning from more experienced: mentoring (P5) support from manager (O8)	Overwork (L3, L4, O8): No time for interaction with colleagues Emphasis on use of time: “doing people rather than being” (L3)
Training in communication skills between	Bad communication between nurses,

nurses, managers, and doctors (L3)	managers, and doctors (L3)
Training on interaction with patients (A6)	Nonsupported situations (A6, A7)
In-service training about loss and CF (L3, A7)	Barrage of losses (A7)
Interaction with colleagues (A7, P5): Supportive advice from colleagues (L4)	Discharge or death of patients
	Interaction with colleagues (A7, O8): Codependency (A7)
	Erratic knowledge base (L3)
Professional practice group (L3)	Lack of debriefing after difficult situation or death (O8)
Support group for loss and high risk situations (P5, A6)	Nonhelpful support group (P5)
Support from patient's family (P5)	Interference from patient's family (L3, A6)
Being able to leave personal stress at home and focus on others (A6)	Personal stress compounded by daily exposure work stress (A6)
Breadth of personal experience (A7): Seeing life trajectory	Not having a good fit with nursing area (O8)
New generation of nurses: Healthier boundaries (A6)	New generation of nurses: Lack of accountability (A7)
Night shift: Less interruption from families and	Night shift: Less support available (A6)

administrators (A6)

Dangerous patients (P5)

Moral distress (L2, O8):

Unaddressed ethical questions (A7)

Unreported punitive behavior (L2)

Having to give hurtful treatment (A7)

Having to treat against patient's wish (L4)

Training in communication skills and interactions between colleagues, managers, and doctors can help strengthen self-confidence and self-care:

It's down to communication skills. . . . [When] I was a manager for many years, . . . one of the things that I found – when nurses *were* crashing and burning, when they were having trouble on a unit, or whatever – I think everything comes back to communication skills.

. . . [It's about] learning to have hard conversations [with] a doctor who's just learning his role [and] boundaries [and] how to work with nurses when he perceives he is in charge. . . . It's not judgmental coming from you. It's because you're the person who's *at* that bedside, and you're there reading that patient for 12 hours, and he's there 10 minutes an hour, if that. So it's about collaboration, as well. (L3)

Although training in communications from a book, such as Patricia Benner's "From Novice to Expert" was helpful to one participant (L3), she added, "They'll do theory, but

you don't learn to communicate well from reading a book. It has to be done by interaction."

Training on interaction with patients and their families was considered very helpful in supporting compassionate care, according to A6. Interaction with colleagues at work can be either a positive support or a negative drain. Getting supportive advice from colleagues (L4), as well as simple, casual interchanges helped the participants as a whole:

I had a couple of really good friends that I worked with. And . . . the three of us got a lot of grief from some of our coworkers because we spent time together outside of work. So one of my friends was my twelve-hour partner, so she did the day-shift part of my shift, and then another one was somebody that used to work nights with me and then she went on to work days. But the three of us used to bike on our days off. We had similar schedules. (A7)

The interchange between these colleagues helped them monitor each other, as well as give support to each other when needed. "We always love to talk with each other. . . . It makes me yearn for more. It's like something quicksilver. . . . You get to the point where you're just starting to connect and then . . . somebody's pager beeps" (L4).

In-service training in coping with grief, any type of loss, and CF, when available, was very helpful in strengthening resiliency (L3, A6, A7). In one course offered on CF, the instructor presented a graph of:

Here you are, and then here's when you start dropping, and you start pulling yourself away. And then here's where we're at the bottom. . . . You need to make sure that your life is [at least] half full. And . . . if you dip below that half-full, it's

going to be a lot harder to fill it up. So taking the time when you're starting to dip, to fill up and pull yourself away a little bit. And how do people recognize that it is okay to pull away, it's okay to distance yourself? . . . A lot of people think . . . that you're not a good nurse unless you're a hundred percent invested all the time.

And you can't be a hundred percent invested in your patient all the time, because you have to keep yourself separate. I think that's an important piece for people to understand. (A7)

Having a support group which addressed loss and high risk situations while at work provided useful interaction and information (L3, A7). There were, however, difficulties in making this available to all who needed or wanted it (A7). Professional practice groups have also been supportive (L3).

In addition to being able to receive support from one's nursing manager was not usual, but when available was extremely valuable (O8). In some cases support was provided by a mentor, a more experienced person in the nursing area (P5). Another group who could provided valuable support to a stressed nurse was the patient's family:

The family would often bring the person in [to the psychiatric unit or emergency department]. So we did a lot of short-term work with families. . . . That helped. When you really get something back, you know? When you really get that – whatever that magic thing is between people – when you get it back, yes that alleviates – so that it takes away some of the fatigue for a little bit. But then the next person comes in. (P5)

Some nurses found working on the night shift helped them cope with the stress, due to less interruption from families and management (A6). At the same time, though, other nurses working the night shift found it a very negative situation, as there was less physical and moral support available, and could lead to tremendous fatigue when attempting to be a mother and wife, or take care of personal life stress during the day (A6).

As expected, one of the worst inhibitors of resiliency was feeling overworked, without time to breathe, interact as a humane, compassionate person with patients or colleagues, or de-stress (L3, L4, P5, O8).

The whole point . . . is to find out from the patient what's really most important to them, and connect with them to make them feel cared for. That's quality. . . . But it takes a toll in this environment where you barely have time to tie your shoes or go to the bathroom, far less sit down. It runs contrary to my personal philosophy, as a person, to do health care the way we're being asked to do it now with the onset of computerized charting." (L3)

This could lead to miscommunication between nurses, managers, and doctors (L3). Too often unsupported situations, due to miscommunication, might occur leading to unsupported patients:

It's very difficult to be a nurse – to care for a patient, to deliver a baby that [is probably] going to die, or to sit with families while they hold that baby, and that baby dies. . . . When you know that that's what the family are there for, there's just all the emotions around how do you support this woman through that? (A6)

Another area where support was lacking surrounded the use of digital communication devices. “With the advent of social media, [a] number of people . . . have friended their patients on Facebook. . . . Because this a newer phenomenon, nobody has really addressed it. There’s no policies [regarding the ethics of this situation]” (A7)

Interaction with colleagues could also be very negative and add to the stress (L3, A7, O8). For L3, some people entered Labor and Delivery, having been trained “on the job, and that’s as good as wherever you work. So the knowledge base was very erratic. Whereas I had *seen* in England and Australia, that when people enter with a consistent educational program, that you get more consistent practice.” Colleagues who had codependency and boundary issues pulled morale down:

The person who has very little ability to set a boundary has a *tremendous* risk for CF. People who live through other people – it’s just: help! And unfortunately, there are a lot of people that [sic] go into nursing because that satisfies that need. . . I’ve worked with a number of codependent nurses, and it’s very fatiguing [laughter]. (A7)

The new generation of nurses may have brought a healthier attitude regarding boundaries, but many seemed to lack accountability. “I was taught that sort of accountability, that even if I delegate it, I went back and I checked to make sure it was done right – as opposed to a newer generation of, “I’ve delegated – that’s done, and if it’s not done right, it’s not my fault” (A7).

Subtle interactions between nurses, managers, and physicians can also lower resiliency through lateral violence: “Sometimes, in verbal ways, sometimes in subtle –

you know, just silence or you feel a vibe or whatever, so that – It makes people very nervous. And there's a lot of that in nursing, and there actually are organizations like the Critical Care Nurses Association that has a no-tolerance policy for lateral violence" (L3). Lateral, or horizontal, violence refers to "behavior that humiliates, degrades, or otherwise indicates a lack of respect for the dignity and worth of an individual" (Dumont, Meisinger, Whitacre, & Corbin, 2012, p. 44).

Because a hierarchy exists in the medical profession, seen clearly in the operating room (O8), distinctions between positions can amplify the lateral violence. Lateral violence "is of particular concern in the healthcare setting because it disrupts relationships and causes barriers to communication needed to effectively care for our patients. [Lateral violence] has also been identified as having a negative impact on nurse retention and recruitment" (Dumont et al., 2012, p. 44).

Although a breadth of personal experience can be available, including understanding the trajectory of life, the constant barrage of stress and loss are one of the primary reasons resiliency was lowered for the participants. Loss appeared not only through death, but in the discharge of a person after a long-term treatment (A7). When this loss was compounded by lack of debriefing, nurses' resiliency was further lowered (O8). For some people, being able to leave stressful situations at home to go to work as a nurse, caring for others, was a positive reinforcement (A6). In more cases, however, the added stress at home led to lowered resiliency when the nurses had to face the daily stresses of work (A6).

Moral distress in the workplace was another significant stressor, leading to CF (L2, L4, A7, O8). This could occur from unaddressed ethical questions (A7), having to treat against a patient's wishes (L4), having to give hurtful treatment (A7), or unreported punitive behavior (L2):

C-sections are nothing for us, but for a Somali woman, her esteem as a woman is impacted. So, I find the providers don't – What I'm really interested in is, what happens when a patient declines your recommendations? Do you ever – a health care provider, do you experience moral distress, emotional distress, communication problems? Do you just get – I mean, I see punitive behavior by health providers all the time. If you say, "I don't want a C-section," then I have to admit, I see punitive behavior. So a lot of times I work in the Somali community. . . . Biopower [is] when we have power over life. So doctors have power over life, and how we use that power – Especially doctors, not so much nurses, because we don't have prescriptive authority. But doctors have this power to say, "You need a C-section. You need – " I mean, they have *incredible* power over people. I mean, if you have that power, you really have to be careful that you're not using it for your own agenda, but only for the patient's agenda. (L2)

In addition to the negative pulls on resiliency mentioned by many of the participants, individual nurses had personal barriers to maintaining balance, and managing stress. Although some people had benefited from support groups and inservice training directed at life-skills, CF, and coping with loss, others felt these forms of support were not sufficiently helpful for individuals (P5).

Workplace Support Desired for Giving Compassionate Care and Being Resilient to CF (3.3)

Nurses wanted more daily support in their work (L2, L4, A6, A7, and O8).

Because the needs differed between individuals, no one suggested a standardized training program for strengthening resiliency to CF. This daily support could take various forms, such as having more time to decompress before going on to another stressful situation, and provision of what is needed physically or logistically for the nurse to be able to give compassionate care. Specific workplace support mentioned was:

- Consistent, not absentee, management (O8) who set a positive tone, and provide support, both physical and morale (L4).
- Mentors who empower nurses, and help them achieve life balance, as well as learn how to cope with workplace stressors such as lateral violence (L4).
- More frequent training sessions offered in coping with loss and high-risk situations (A7).
- Training for recognition of CF for both nurses and managers (A6).
- A specific support program available for people who are beginning the slide into CF (A6).

One nurse would have liked:

. . . to be able to go to my manager and say, “This happened with my patient, and I’m very distressed about it. I want to be sure that the next time this happens . . . I could have this and this. . . .” There was no, “What else do you need? Is there

anything you need to talk about?” There was no time for it, you know? It’s not considered important. So, if it just legitimizes outcomes, it would become important. . . . If we . . . could measure things in terms of compassion instead of dollars, I think we would do a hell of a lot better. . . . Or at least part of the equation .(L2)

A6 said, “To some nurses, support looks like staffing. We don’t have enough staffing. If we had more staff . . . I could take my breaks, I could get a lunch, I could go walk out through the stairs, . . . or go to an in-service.” Another participant summarized her experience as a nurse:

You start off being a nurse thinking it’s all these technical skills. And when you finally get those technical skills and all the concerns about safety – your patient being safe, and doing the right thing – you realize that – there’s this humanity about this and there’s this caring that’s *really* difficult to teach. I mean, how on earth do you teach a student nurse to be caring? Especially when they’re so worried about doing their skills right, or saving the patient’s life? I believe, in the end, nursing is so much more about . . . compassion and caring [but] it’s very difficult to teach or even talk about. (L2)

Summary

The purpose of this study was to determine the essence of resiliency to CF among nurses. This chapter presented the setting for the study, the demographics of the participants, the data collection and analysis processes, and the results of semi-structured interviews with seven nurses.

Summary of Participants' Experience of Resiliency to CF

The participants believed that nurses were, in general, empathic, and this was the reason their profession was at risk for CF. Six of the seven nurses had experienced CF, and developed resilience to it in the years following that experience. The ability to be resilient, from their point of view, had its basis in positive attitude, realistic self-judgment and self-awareness, and adopting supportive behaviors. Maintaining life-balance, touching into spiritual energy, prioritization on actions, identification of what can be changes, and retaining clear boundaries with patients were considered the primary components of resiliency. Most of the participants believed that the ability to be resilient in the face of daily loss and stress had its foundation in genetics and early family life.

The absence of certain negative workplace factors such as lateral violence helped the participants avoid CF. Training in communication skills and interactions between nurses, managers, and physicians also supported their resiliency. Breadth and longevity of experience in the nursing profession was an asset, as well as working with colleagues who were able to be supportive without being codependent.

Summary of Participants' Distinctions between Burnout and CF

The participants distinguished between empathy and compassion by describing empathy as feeling what another person felt, and compassion as wanting to help the other person. In burnout, neither empathy or compassion for others was necessarily reduced. Instead, workplace factors such as changes in protocol, lack of time to perform at one's best, and lateral violence could lead to burnout. An overlap between burnout and CF was possible, as well as having them in sequence – CF leading to burnout, or vice versa.

Summary of Desired Support for Resiliency to CF

The participants considered mindfulness, or self-awareness, a critical part of being resilient to CF. The participants wanted support or training for this. The participants considered learning from various sources important, in-service sessions on coping with loss or high risk situations, and advice from colleagues and mentors. They wanted further training for themselves and their colleagues in how to monitor themselves and each other with regard to CF risks, and a support program for recuperating from any level of CF was requested.

The following chapter discusses interpretations of this study's results in relationship to the research questions, the paradigms of CF research, empathy, and resilience, and the literature review presented in chapter 2. Limitations of the study will be presented. Recommendations and the implications for positive social change will complete chapter 5.

Chapter 5: Discussion, Conclusions, and Recommendations

[To be completed after the proposed study has been conducted.]

[from Chapters 1-3]

Areas for Future Investigation

Too little is known about the positive outcomes from dealing with trauma, such as posttraumatic growth and vicarious resilience. Most of the studies about CF have been correlative, quantitative, based on limited populations, and focused on risk factors, rather than resiliency strengths. Little is known about what contributes to resiliency to CF (Cameron & Brownie, 2010). No research has yet been done on the outliers, the people who are empathic, yet resilient, and do not develop CF in situations where most others do.

Although an increasing amount of research is being done studying the neural links of empathy, there are no apparent studies of the connection between chronic negative emotional contagion and the psychoneuroimmunological system. It would be interesting to know what specific immune reactions occur to any type of emotional contagion.

Although Hatfield and her colleagues (1992, 1994, 2009) have studied the “what” of emotional contagion, and Rothschild (2006) has presented ways to circumvent negative reactions from emotional contagion, more research is needed into the effectiveness of these interventions, and what actually happens neurologically if emotional contagion is interrupted or stopped. Other areas of research which need to be studied:

- How does emotional contagion occur when a person has limited sensory input?

- Who is most vulnerable? And when?
- What are the social implications if a person has more ability to “infect” others with emotional contagion, or if a person has a lower or higher ability for healthy emotional contagion?
- Are there other explanations of emotional contagion (e.g., morphic field theory) which are valid?
- What happens if someone consciously tries to imitate (e.g. neuropsychological programming) another’s emotion?
- What are the most effective ways to teach people to be more adept in understanding others’ emotions, and improving their own emotional intelligence, and yet retain resiliency to CF?

Future biopsychological research on empathy would benefit from a neutral, integrated analysis and presentation of an atlas of specific brain areas activated, indicating correlative measures of empathy, when the research was conducted and by whom, what types of scanning or observation was done, what types of stimuli, in other words a type of concordance of all prior research. This data base would be refined and updated, again by neutral meta-analysts. Instead of two major camps who compete for research funds by replicating and refining research based on their separate philosophies of empathy, researchers in this area might be able to more thoroughly explore and understand the complex empathic system.

Research on human empathy might also benefit from a re-examination of the scales (most of which are self-report scales) used to test for empathy, as well as further

study validating the earlier results done using empathy assessment tools in real-life situations. Empathy is a continuous process of development within individuals, with frequent possibilities for promoting more cohesive social behaviors.

As empathy may be a critical part of resiliency breakdown or CF, more studies looking at specific elements of resiliency and empathy, such as humor, with regard to CF are needed.

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Appendix A: Acronyms

ABI/INFORM	Abstracted Business Information Complete
ACTH	Adrenocorticotrophic hormone
CD4	A surface protein
CF	Compassion fatigue
CINAHL	Cumulative Index to Nursing and Allied Health Literature Plus;
CRH	Corticotrophin-releasing hormone
DLC	Dorsolateral region of the PFC
EMG	Electromyography
ERIC	Education Resources Information Center
EU	Emotion understanding
fMRI	Functionoal magnetic resonance imaging
GAS	General adaptation syndrome
HCP	Healthcare professional
HPA	Hypothalamic-pituitary-adrenal
HSQ	Humor Styles Questionnaire
IFG	Inferior frontal gyrus
IPL	Inferior parietal lobule
IRI	Interpersonal Reactivity Index
MBI	Maslach Burnout Inventory
MEDLINE	Medical Literature Analysis and Retrieval System Online
MEP	Motor-evoked potential
MNS	Mirror neuron system
MPQ	McGill Pain Questionnaire
MT48	48-item Mental Toughness
MTL	Medial temporal lobe
NIMH	National Institute of Mental Health
OFC	Orbitofrontal region of the PFC
PC	Posterior cortex
PEI	Self-perception of emotional intelligence

PET	Positron emission tomography
PFC	Prefrontal cortex
ProQOL	Professional Quality of Life appraisal instrument
PSAI	Personal Stress Assessment Inventory
PSS	Perceptual symbol system
PTSD	Post-traumatic stress disorder
PVN	Paraventricular nucleus (of the hypothalamus)
SNS	Sympathetic nervous system
STS	Secondary traumatic stress
STS	Superior temporal sulcus
TCI	Temperament and Character Inventory
Th	T-cell helper cell
TMS	Transcranial magnetic stimulation
ToM	Theory of mind explanation of empathy
TPJ	Temporoparietal junction
TT	Theory-theory, a type of ToM
VM	Ventromedial region of the PFC
VPC	Ventromedial prefrontal cortex
VT	Vicarious traumatization
YRRI	Youth Risk and Resilience Inventory

Appendix B: Informed Consent Form

You are invited to take part in a research study of why some empathic people do not develop compassion fatigue. You were chosen as a key informant for the study because of your knowledge of your profession, the occurrence of compassion fatigue within it, and the likelihood you would have experience with being empathic and yet having resiliency to compassion fatigue. This form is part of a process called “informed consent” to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Susannah W. Smith, who is a doctoral student in General Psychology, Research and Evaluation at Walden University.

Background Information:

The purpose of this study is to learn reasons why some empathic healthcare professionals do not develop compassion fatigue. Understanding characteristics of these compassion fatigue resistant people will help modify intervention and training programs to strengthen these behaviors and traits of resiliency.

Procedures:

If you agree to be in this study, you will be asked to:

- Participate in an interview of 45 minutes duration, which will be audio-recorded. If you desire more time, the interview can be continued.
- Examine a synopsis of findings for accuracy, and provide feedback.

Voluntary Nature of the Study:

Your participation in this study is voluntary. This means that everyone will respect your decision of whether or not you want to be in the study. No one at your place of work will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind during the study. If you feel stressed during the study you may stop at any time. You may skip any questions that you feel are too personal.

Risks and Benefits of Being in the Study:

The risks of participation are minimal. It is possible that description of experience with compassion fatigue may bring some psychological discomfort. If this should occur, the Employee Health Services will help. The benefits of participation are in contributing to research which can lead to positive programs to counter the occurrence of compassion fatigue by strengthening resiliency.

Compensation:

Although there will be no compensation for being in the study, a copy of the findings will be available at the conclusion of the study, should you be interested. In addition, if your department is interested, the researcher will conduct a workshop, with presentation of the findings of the study.

Confidentiality:

Any information you provide will be kept confidential, with the exception of disclosure of criminal behavior, which will be reported. Pseudonyms will be given to all participants for use in transcripts of the interviews, and any identifying information will be deleted in the transcripts. Transcription of the audio recordings will be done by the researcher. All data will be securely stored in password protected files, on a peripheral hard drive stored in a lock box, and maintained until five years after the completion of the project. The researcher will not use your information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in any reports of the study.

Contacts and Questions:

You may ask any questions you have. If you have questions after this initial meeting, you may contact the researcher via phone (425-984-4154) or email (Zanna.Smith@gmail.com). If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-800-925-3368, extension 1210. Walden University's approval number for this study is 08-24-12-0116885 and it expires on August 23, 2013.

The researcher will give you a copy of this form to keep.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below, I am agreeing to the terms described above.

Printed Name of Participant

Date of consent

Participant's Written or Electronic* Signature

Researcher's Written or Electronic* Signature

*Electronic signatures are regulated by the Uniform Electronic Transactions Act. Legally, an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically.

Appendix C: Letter of Invitation to Participate

For email subject line: Reply requested: Your interest in participating in a RESILIENCY TO COMPASSION FATIGUE PROJECT

Dear _____,

I am interested in your experience of resiliency to compassion fatigue (CF), both in yourself and in others. This is for a research project addressing resiliency to CF in medical practices which have a high risk for CF. The study is performed as a partial fulfillment of the requirements for my PhD degree in research psychology at Walden University under the supervision of Dr. Pat Carmoney.

Your participation in this project will provide useful in-depth information on this topic. Participation also may help you develop your own resiliency, based on your strengths. You qualify for participation if you are a healthcare professional and have knowledge, through experience or observation, of CF.

I respect your time and privacy. Your participation will be an interview of 45 minutes or more, depending on your wishes. The interview will be in a place you choose, and at a time of your choice outside of working hours. After the interview is transcribed, you will have a chance to provide feedback. The project interviews will be conducted during the fall of 2012.

Participation in this research project is totally voluntary. You may withdraw from participation at any point without penalty. All data from the interviews is confidential and will be used only for the stated research purposes. Although recall of experiences with CF may be upsetting, there are no foreseeable risks to participation.

The overall benefit of your participation is to help healthcare professionals develop strengths-based practices to decrease the incidence and affect of CF. If you are interested in participating, please contact me at my project email (LifeWork.Research@gmail.com) or my phone (425-984-4154).

Please feel free to forward this email to anyone else you think might be interested. Thank you for considering this project.



Susannah (Zanna) Smith
General Psychology, Research & Evaluation
Walden University

Appendix D: Letter of Cooperation

Community Research Partner Name
Contact Information

Date

Dear Susannah Smith,

Based on my review of your research proposal, I give permission for you to conduct the study, entitled “Resilience to Compassion Fatigue in Empathic Healthcare Professionals,” within the Insert Name of Community Partner. As part of this study, I authorize you to recruit 9 to 12 people who (a) have experienced the phenomenon of resiliency to compassion fatigue; (b) have high interest in it; and (c) are willing to commit some time to the study process. No minors or other vulnerable populations will be approached to become participants. The study will be open to any age, sexual orientation, gender, ethnicity, nationality, or socioeconomic status. Individuals’ participation will be voluntary and at their own discretion. The recruitment process will be by referral. In-depth individual interviews, digitally recorded, will be used to collect data. After transcription process, the participants will again be approached for memberchecking. Results, without identifying details, will be available as executive summaries to the various departments which participate. The full report will be published in a dissertation for satisfaction of a doctoral degree in psychology research from Walden University, and will appear in abbreviated form in subsequent articles. Workshops presenting the results and recommendations from the study will also be used to disseminate the information.

We understand that our organization’s responsibilities include: one or two hours of time from each of nine to twelve healthcare professionals. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University IRB.

Sincerely,

Authorization Official
Contact Information

Walden University policy on electronic signatures: An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically. Electronic signatures are regulated by the Uniform Electronic Transactions

Act. Electronic signatures are only valid when the signer is either (a) the sender of the email, or (b) copied on the email containing the signed document. Legally an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. Walden University staff verify any electronic signatures that do not originate from a password-protected source (i.e., an email address officially on file with Walden).

Appendix E: Interview Question Guidelines

For the primary research question: What is the collective essence of healthcare professionals' experience of resiliency to compassion fatigue?

1. What is your experience of empathy personally and in coworkers in your workplace?
2. What happens when a person develops CF?
3. What are your experiences or observations of compassion fatigue?
4. What is your experience of resiliency to CF?

Research Question 2: What distinctions and similarities do healthcare professionals experience between burnout, CF, and vicarious trauma?

5. How is your experience or observation of CF different from burnout or vicarious trauma?
6. What is your experience of how empathy relates to developing CF?

Research Question 3: What qualities and characteristics do health care professionals experience as supportive to being empathic and yet resilient to CF?

7. Have you experienced people who are empathic but do not develop CF? Are you one of these people?
8. What helped have resiliency to CF?
9. What would you like to see change in giving support to HCPs so they can retain compassion and empathy?

In my field journal I will note what contexts or situations may have influenced these experiences or observations. I will usually end with a snowball referral question, asking if there are other people whom I might interview.

Appendix F: Copyright Permissions

E-communication with Charles Figley, PhD: charlesfigley@gmail.com

To Dr. Figley:
Apr 9 2012

I am completing my dissertation proposal, "Resilience to Compassion Fatigue in Empathic HCPs," and would like to include my adaptation (attached) of your figure describing compassion fatigue. May I have your permission?

If you would rather I used your original (with your permission), I understand.

Thank you

"Zanna" (Susannah W Smith), PhD Candidate
General Psychology, Research & Evaluation
Walden University

425-984-4154 (Seattle)
Research & Counseling ~ LifeWork Unlimited

Figley figure.docx
13K View Download

From Charles Figley, PhD:
Apr 9 2012

Sure! Interesting. Charles.Figley@Tulane.edu 504-862-3473 CharlesFigley.com
>...

Charles

Figley@Tulane.edu
504-862-3473

CharlesFigley.com

E-communication with Sarah C. Voss Horrell, PhD (following a phone conversation):

To Sarah Voss Horrell: sarah.vosshorrell@va.gov
10 April 2012

Thank you for the time spent just now, talking with me on the phone.

Attached are the abstract for the dissertation proposal, "Resilience to Compassion Fatigue in Empathic HCPS" and the table from your article.

Thank you also for your permission to print the table.

Zanna (Susannah W Smith), PhD Candidate
General Psychology, Research & Evaluation
Walden University

425-984-4154
Research & Counseling ~ LifeWork Unlimited

2 attachments — [Download all attachments](#)

abstract.docx
11K [View](#) [Download](#)

Voss Horrell Table.docx
13K [View](#) [Download](#)

E-communication with S. Wolin, MD and S. Wolin, PhD:

To S. Wolin, MD and S. Wolin, PhD: info@projectresilience.com:
9 April 2012

Dear Drs. Wolin

I would like your permission to include the attached table in my dissertation, "Resilience to Compassion Fatigue in Empathic HCPs." I am impressed by your work in resiliency, and hope you are both continuing involvement with the Project Resilience.

I am new to the "seeking permission" process, and if there is anything more I can send you, please let me know. I have also attached my abstract.

Thanks very much for your time, and any reply.

Susannah W. Smith, PhD Candidate
General Psychology, Research & Evaluation
Walden University
425-984-4154 (Seattle)

2 attachments — [Download all attachments](#)

Wolin Table.docx
12K [View](#) [Download](#)

abstract.docx
11K [View](#) [Download](#)

From Sybil Wolin, PhD: sybilwolin1@yahoo.com
11 April 2012

Dear Susannah,

I am pleased that you will be using the work of Project Resilience in your dissertation.

You will need to write a permission form and send it to me to sign. It should include what you are using, where you're using it and for what purpose. In addition, please indicate that you will acknowledge our copyright, that this is a one time use, and that you are not using our materials for profit.

Once I've received the form, I'll review it and send it back to you with my signature.

Sincerely,

Sybil Wolin

To Sybil Wolin, PhD
11 April 2012

Thank you. I'll find the form online, complete it, and send it on. I appreciate your time and generosity.

To Sybil Wolin, PhD
12 April 2012

The attached form is based on one Columbia U uses. I hope this is adequate.
Thank you once again.

Attachment:

Copyright Permission Form

Susannah W. Smith, PhD Candidate
Walden University
General Psychology, Research & Evaluation
8747 Phinney Ave N, #11
Seattle WA 98103

12 April 2012

Dear Drs. Wolin:

I am requesting permission to reprint the attached table, "*Developmental Phases of the Seven Resiliencies*" from p. 425 in "Resilience among Youth Growing Up in Substance-Abusing Families," by S. Wolin and S. Wolin, 1995, *Pediatric Clinics of North America*, 42. Philadelphia, PA: W. B. Saunders.

This request is for permission to include the above content as part of the following project that I am preparing:

A dissertation proposal for PhD in General Psychology, Research & Evaluation, at Walden University, "Resilience to Compassion Fatigue in Empathic HCPs." The abstract for the dissertation proposal follows:

Nursing has been the largest healthcare occupation in the United States, involving about 2.6 million working professionals. However, a decline in these numbers has been observed since 2008 raising the need to monitor the situation. One possible cause, compassion fatigue (CF), was proposed by Figley in 2002 using a quantitative model; that theory has since been declared incomplete among scholars. Therefore, the purpose of this study is to investigate the phenomenon of resiliency to CF using paradigms from empathy, emotional contagion, resiliency, and CF theories to discover the collective essence of those empathic personnel who appear to be resilient. A phenomenological approach based upon the

Moustakas and van Manen qualitative methodologies is proposed to investigate the participant trends. Data will be gathered through in-depth, open-ended interviews of 9 to 12 nurses. The transcribed interviews will be organized using NVivo 10 software before being analyzed. The implications for positive social change from the proposed research include increased understanding in the application of professional development among health and trauma providers that might further lead to a lowered risk for CF and a higher ability to provide effective care. This may also lead to new policies regarding in-service training and intervention for CF, an increase in the health of these HCPs, and the lowering of the economic costs of absenteeism and loss of productivity due to CF.

I believe that you are currently the holders of the copyright. If you do not currently hold the rights, please provide me with any information that can help me contact the proper rightsholder. Otherwise, your permission confirms you hold the right to grant this permission.

This request is for a non-exclusive, irrevocable, and royalty-free permission, and it is not intended to interfere with other uses of the same work by you. I will be including a full citation to your work.

I would greatly appreciate your permission. If you require any additional information, do not hesitate to contact me at the address above, or by email (zanna.smith@gmail.com), or phone (425-984-4154).

Sincerely,



Susannah W. Smith

Attached: Wolin table, *Developmental Phases of the Seven Resiliencies*

From Sybil Wolin, PhD
12 April 2012

I grant permission to use Project Resilience materials as specified in the attached form.

Sybil Wolin Ph.D.

Director, Project Resilience

E-communication with Yvonne R. Farley, PhD: yvonne-farley@uiowa.edu

To Yvonne R. Farley, PhD:
12 April 2012

Hello, Dr. Farley

I would like your permission to include the attached table, "Spiritual Components that Enhance Individual Resiliency," in my dissertation, "Resilience to Compassion Fatigue in Empathic HCPs." This would be a one-time use, with no monetary gain.

I have also attached my abstract, so you'll have an idea what my project will be.

Thank you for your time and willingness to share important information.

Susannah W Smith ("Zanna"), PhD Candidate
General Psychology, Research & Evaluation
Walden University

425-984-4154 (Seattle)

From Yvonne R. Farley, PhD
13 April 2012

Yes- this would be great. I am glad it is helpful! Thank you, Yvonne

Sent from my iPhone

Appendix G: Evolution and Development of Empathy

Imitation is one way the young of humans and many nonhuman species learn. Whether this is the key element which evolved into the human empathic response, or one of many components of empathy, it is possible the complexity of human empathy developed due to needs of social bonding, particularly between mother and infant (Jones, Field, & Davolos, 2000; Swain, Lorberbaum, Kose, & Strathearn, 2007). Cognitive empathy enhances social functioning, including prosocial behaviors, but also may be involved in antisocial behavior, such as the person who seems able to demonstrate empathy, but uses cognitive skills to ferret out vulnerable areas and manipulate others (A. Smith, 2006). Empathy, however, is not equivalent to benevolence, for it may also underlie antisocial behavior.

Affective empathy may motivate humans to behave with compassion, and could promote group selection and inclusion, as well as be a key component of violence inhibition (A. Smith, 2006). Having empathy means being able to appreciate the emotions of others, and requires the integration of perception, one's own experience of emotions, the physiological reactions of the observed person and one's self, with an accumulated cognitive awareness of meaning, possible outcome of a situation. Without this integration, various maladaptive behaviors may result. Having cognitive empathy without affective empathy may lead to the development of people who punish others for sharing negative emotions linked to danger, insecurity, discomfort, sadness, or stress. These people do not usually appreciate others for sharing positive emotions (connected with safety, comfort, relaxation, pleasure, with enhanced immune systems), and are not

part of a viable social community (A. Smith, 2006). Having emotional empathy without cognitive empathy, a topic sometimes treated in utopian novels and science fiction, would be equally disastrous, leading to spontaneous behaviors and reactions damaging to the group cohesion and development (A. Smith, 2006).

There are no clear sex differences in empathic abilities or sensitivities, although studies and beliefs differ regarding this (for example, the study by Singer et al., 2006). Consensus exists, however, that if empathy is encouraged to develop in a healthy manner, it grows as the human matures from infancy into young adulthood (S. Miller, C. Miller, Bloom, Hynd, & Craggs, 2006; A. Smith, 2006). If we considered psychopathic disorders as various types of empathy deficit (Dapretto et al., 2006; Miller et al., 2006; Soderstrom, 2003), a totally new system of therapy could develop, based on training neural pathways in higher levels of empathic response (Begley, 2007).

Normal human development of empathy has been studied by a number of scholars, including Eisenberg, McDonald, Messinger, and earlier, Stern (1985). McDonald and Messinger (n.d.) stated that “the ability to empathize begins at an early age, with infants as young as 18 hours showing some responsiveness to other infants’ distress” (p. 23). In a recent longitudinal study (Eggum et al., 2011), children’s understanding of emotion (EU) and ToM-based empathy were tested at 42, 54, and 72 months of age as predictors of prosocial orientation. As the toddlers matured, EU related positively to the children’s sympathy. In this study, sympathy was distinguished from empathy, but the authors suggested it may “stem from empathy,” (p. 4), in contrast to

Bennett's (1998a) distinction between the acceptance of multiple realities shown in empathy, and the single reality indicated in sympathy.

McDonald and Messinger (n.d.) found that by the second year of life, children were able to develop an empathic reaction to another in distress, rather than a self-directed empathy to relieve personal distress. In the next few pre-school years, children developed significantly in cognitive empathy. Scholars cited by McDonald and Messinger had found correlations between empathic ability and more cooperative and socially-oriented behavior. Early in life, empathy development appears a salient factor in social development (Eggum et al., 2011).

Deficits in empathy are one of the early indicators that children may have disorders such as autism, attention deficit hyperactivity disorder (ADHD), and other psychiatric conditions, but deficits have also been observed in children with mothers who are substance abusers, restrictive in emotional expression, or severely depressed (Jones et al., 2000; Swain et al., 2007). Early empathy deficits probably occur as a result of many factors, including lack of initial bonding, genetic or prenatal predisposition, traumatic environmental experience, or early childhood chronic stress (Jones et al., 2000). Concomitant traits of these infants are less expression than normal infants, showing a flat affect, less vocalization, delayed growth and intellectual development (Jones et al., 2000), and certain other neurological abnormalities, particularly in the hypothalamic-midbrain- limbic-paralimbic-cortical networks (Swain et al., 2007).

Appendix H: Epoché

Before embarking on the proposal for this study I had seen instances of healthcare professionals become depressed and unable to connect with their work or patients. I learned this was termed compassion fatigue (CF). I also met a number of people who seemed exposed to similar conditions as those who developed CF, who were equally empathic, but did not develop what was considered a type of burnout. I made numerous assumptions, including personality characteristics being the basis for the differences. In order to be aware of these biases when I developed the interview guideline questions or when I interviewed the participants, I followed the process of epoché, as described by Moustakas (1994).

I captured these thoughts in my field journal, as well as from my actual questions and comments during the interviews. This is a summary.

RQ 1: What is the collective essence of healthcare professionals' experience of resiliency to compassion fatigue?

After talking casually with several dozen healthcare professionals about CF, I came to the conclusion few of them knew of people who were resilient to CF. At a psychological conference, when I mentioned CF and nursing, the response was: "Isn't it inevitable?" Many nurses and articles reported the same attitude: If a nurse worked in an area at high risk for CF, such as pediatric oncology or ICU, CF was inevitable. No one had resiliency to it. But this attitude was based, I knew, on looking at CF and resiliency to it as a static rather than fluid and dynamic process.

A large assumption, based on Figley's 2002 model of CF, was that a person had to be empathic before developing CF. But this did not connect or contrast empathy with compassion. Can one be compassionate without being empathic? Or vice versa? I was unsure of the answer. (And continue this uncertainty now.) Therefore I asked the participants what their experience and observation of empathy had been.

Empathy is, in my view, a mix of neurobiological and cognitive responses to a place, thing, animate being including humans and other mammals, or situation. It is an ability to be in another person's or object's reality, at the same time as recognizing the boundary between one's self and the other. In healthy empathy, whether from a person's or another animal's viewpoint, the difference boundary needs to be intact: you not only experience the other's reality, but you *realize* it's the other's reality. This allows a dynamic and simultaneous flow between distancing and integrating. Compassion, on the other hand, may not have the fullness of empathic experience. It is an understanding of the other's reality, coupled with a desire to help, if the situation is a negative one. Nursing in general, as well as specific areas like oncology, acts as a magnet for people who have a high level of compassion. It seems as if some people have a preset attraction to work in areas of high trauma, chronic illness, long-term and palliative care. This passion for the work can be a positive support during high stress, but often is a factor leading to erosion of health. Few of us, when involved in doing something we are passionate about, check in to our own well-being of body, mind and soul.

Compassion fatigue theory has suggested there is a certain personality type which is prone to CF. Attachment theory, for example, provides an explanation for people who

are not able to maintain discrete boundaries: we each carry with us a certain way of having a relationship with people, depending on what had happened to us, and wherever we got *stuck* in our childhood. I don't know if I buy that, but I certainly see different attachment styles, and they *do* have a very big difference with regard to riskiness of compassion fatigue. And unfortunately, there are a lot of people that go into nursing because that satisfies a need to be compassionate and helpful. I want to find a way to shape this wonderful attitude so it can be helpful to those people rather than hurting them.

Part of the difficulty rises perhaps from a belief that by taking on another's pain, one can help that person. In Polynesian healing a much healthier belief occurs: healing energy comes through the healer to the patient, constantly replenishing both. This directional healing energy is used by some alternative healers in the United States: the direction of energy is toward the patient so no negative energy comes back to the healer.

My personal experience with compassion fatigue occurred when I was taking care of my husband, who had Parkinson's plus, a very quickly moving form of the disorder. I was physically disabled already, so the physical aspects of CF happened quickly. After a year and a half coping with his disability, my mental health had also deteriorated to the point where my psychiatrist urged me to take a week's respite. That was insufficient, for I returned to the same chaos. After a few months, I took another respite for a month. Every part of my being, particularly my ability to be compassionate with my husband, had disintegrated.

This gradual onset, lack of effective remedies, and downward spiral of one's entire being is typical of many others who have had CF, according to the articles I have

read, and people I have talked to. In nursing, CF can occur at any point in high risk areas, but frequently occurs during the first or second year in a high risk area. Many factors seem to trigger the start of CF, including burnout from the lack of support to do nursing. One of the most difficult parts of any type of nursing is to have to treat the patient against their will. For example, in residential psychiatric nursing when the nurse has to quiet a patient for the benefit of the community, even when the means of quieting may not be the best thing for the patient.

Many people, including healthcare professionals, are very reluctant to talk about hurtful emotions. Although these negative emotions certainly occur, the emotions are quickly stuffed. They think they are coping well with the stress in their lives, then suddenly something surfaces, and—whammy—they are brought to their knees by CF.

One of my friends, a highly respected physician, developed CF. It was based around 9/11 and the fact that she'd lost her father when she was eleven years old. There was no forewarning of her CF. After a month of working as a general practitioner with patients who were dealing with 9/11, the day I saw her she was crying, not able to think, to remember what she was doing, nor her patients' histories. She thought she was going crazy. Many healthcare professionals in this type of situation leave their medical practice, "move to the country and grow grapes." My friend sought help, and within a few weeks was able to regain her professional mind. Even so she decided to take on the position of head of medicine at a foreign medical school, rather than continue her contact with patients.

As with any type of psychological stress disorder, which CF is, there will be varying individual presentations of it. Although training to strengthen resiliency to CF might be helpful, the individual differences in resiliency profiles will vary as much as CF risk profiles. I am skeptical, however, about study results that say a person, or a medical department has a risk factor for CF 80 percent higher than others. CF may have already occurred for that person, so in the present and future there may be a much lower risk.

I've heard some extraordinary stories about people and their ability to have resiliency, even though everything around them is chaotic. There are so many interesting ideas about why a person *can* be resilient. One theory is that people who have had tremendously good familial support as children have higher resiliency as adults. I think that accounts for only a few people, however.

Having a realistic view of their role in helping patients, as opposed to being a martyr or a saint, is one strong resiliency factor for healthcare professionals. These people can give themselves time off from total compassionate involvement. Another resiliency factor is being able to place values and prioritize, saying, "Okay, this *is* more important than doing that." There are people who aren't able to do that. Just knowing what you can control and what you can't seems to make a big difference.

People who are closer to their ethnic traditions seem to have an easier way with empathy—it's so natural to communicate empathically rather than in words—that any problems that might develop because a person *has* empathy are very slight. CF is not a risk because being empathetic and compassionate is just a natural part of living for these

people. Their culture provides support in their spirituality, and in their connection with the natural world, in everyday life as well as in crisis.

The definition of resiliency in general hasn't reached consensus. In my definition of resiliency to CF, we all have pain and chaos in our lives, but we have developed a system of ways to cope with our own stuff, so that we don't replicate the patients' pain and chaos within ourselves. The person who hasn't developed this healthy resiliency may have had so much pain they haven't dealt with, they are wearing glasses which magnify the rips and tears in others, and they can't see a beautiful sky. Being able to enter one's internal world and strengthen self-esteem, healthy attachment style, and stress management could be an extremely important part of strengthening resiliency.

RQ 2: What distinctions and similarities do healthcare professionals experience between burnout, CF, and vicarious trauma?

In early articles the terms secondary trauma, vicarious trauma, and burnout were often used interchangeably with CF. I think there are overlaps between burnout and CF, and possibly between CF and secondary or vicarious trauma. Vicarious trauma occurs when healthcare professionals becomes so totally enmeshed with patients, they experience the patients' trauma as if it were happening to themselves, and develop symptoms of post traumatic stress disorder (PTSD). Some of the PTSD symptoms also can occur in CF.

The term, CF, may be questionable. The symptoms aren't so much a fatigue as a depletion of the ability to be compassionate. Burnout may have that same depletion, but

more frequently is a combination of exhaustion and apathy. CF can certainly be part of burnout, and vice versa.

RQ 3: What qualities and characteristics do health care professionals experience as supportive to being empathic and yet resilient to CF?

My initial assumption was that a continuing education program which helped healthcare professionals bolster their resiliency to CF would be the resulting answer from this study. This program would help people develop personal safety nets, support groups to help them identify risk factors or symptoms of CF within each other, and to help them turn away from CF. Spiritual development, without a focus on specific religion, would help. A survey of what nurses and other healthcare professionals think would be supportive would help inform this topic of resiliency to CF. Much of the literature on CF indicates that nurses want to have more support for being compassionate

Some considerations of resiliency development might not be trainable, however. The person who spurred my interest in the topic of resiliency to CF claimed that her home and family life as a child and adult were the main factors for her not developing CF when others around her were crashing. The training that happens with regard to end of life decisions and related matters is minimal at most hospitals. There's nothing really supporting nurses or any of the other health professionals to be empathic and compassionate.

I don't know how we're going to ever change the healthcare system so people don't develop burnout, with all the paperwork, insurance stuff, time crunches and everything else that's going on. I don't see that burnout is going to be something that we

can easily attack. But compassion fatigue, I think, is really critical. If there's some way that we can have fewer people at risk for compassion fatigue, because we've set up some sort of support system for them, that would be fantastic. I see so many people going into a healthcare profession, wanting to help, having tremendous compassion, and then becoming, through emotional contagion or some other factor, so emptied of their ability to have compassion for people that they become non-productive, non-efficient, or feel they must change professions. It is a tragic loss of people, compassionate patient care, and money.

Appendix I: Coding into Nodes using NVivo 10

Appendix J: Curriculum Vita

Susannah Woolsey Smith

DEGREES:

University of Arizona, Tucson	Mathematics/English/Education BS, Math 1961 MST, Math 1964
additional study	English, Music, Psychology, Law
Univ. of Illinois, Champaign-Urbana	Music Composition MM, Music 1979

HONORS, AWARDS AND RECOGNITIONS:

1961	University Honors (graduated 7th in class), University of Arizona, Tucson
1961-63	National Science Foundation Fellowships, for study in mathematics for Master of Science Teaching degree, University of Arizona
1980-83	CHEDOSA (Consortium for Higher Education Development of Office Systems Automation - an international group of people from colleges and universities who were responsible for developing office automation on their campuses): founder and Executive Director
1981	<i>Who's Who in the Midwest</i> , 18th edition
1985	<i>Who's Who in American Women</i> , 14th edition
1988	New England Consortium of Management Consultants (founding member)

SUMMARY OF EMPLOYMENT

1952-present	<u>Freelance Musician & Composer</u> : Organist, choir director, accompanist for dance, voice, and instrumental. Musicianship coach and university lecturer. Contemporary ensemble performance.
1957-present	<u>Free-Lance Writer & Editor</u> : Books, articles, poetry, short stories, technical papers and manuals, professional and users' newsletters
Aug 1961-June 1970	<u>Mathematics Teacher</u> : High school, community college, and university. Also was master teacher for three apprentice teachers.
Jan. 1975-May 1977	<u>Technical Writer, Editor, Communications Consultant</u>
Sept. 1977-Aug. 1978	<u>Operations Research Analyst</u> : U. S. Army Construction Engineering Research Lab

Sept. 1977- Oct. 1983	<u>Word Processing, Office Information Systems Consultant</u> Defined word processing centers and consulting services offered by various universities and hospitals. Performed feasibility studies and survey research. Made presentations at national conferences, regional symposiums, workshops, and seminars. Administrator at University of Illinois, Champaign- Urbana.
Feb. 1981- Oct. 1983	<u>President:</u> S. S. Ganus & Associates, Consultants in Office Information Systems Technology
Oct. 1983- April 1984	<u>Office Information Consultant:</u> John Grenzebach & Associates, 845 N. Michigan, Chicago IL: Projects included computer, word processing and office automation consultation for fundraising at universities, feasibility studies for campaigns.
June 1984- Jan. 1985	<u>Executive Assistant & Assistant Director:</u> Campus Auxiliary Services, Univ. of Illinois, Chicago: Developed information management system for unit; coordinated strategic planning and administered MBO program; served as liaison for Director, resource on management practices and theory; acted as organizational trouble shooter.
March 1986- Aug. 1986	<u>Principal Consultant:</u> S. S. Ganus & Associates, Chicago Office information consulting for universities, hospitals, foundations, large manufacturers.
Sept. 1986- May 1987	<u>Mathematics Teacher, Department Head:</u> High Mowing School, Wilton NH
Sept. 1987- May 1989	<u>President & Principal Consultant:</u> The Ganus Corporation, Peterborough NH: Business and management consulting, seminars, tutorials, business and technical editing and writing.
June 1989- Present	<u>LifeWork Unlimited</u> (sole proprietorship; semi-retired) Author, speaker, artist, musician, consultant

OTHER WORK EXPERIENCE:

- * Grief counselor. Support group facilitator for various types of support groups, including caregiving, single parenting, and life development.
- * Lecturer on various topics including suicide prevention, self-awareness and self-realization, improvisation techniques, creativity, communications skills, career development, ergonomics and human factors in office information systems design, office automation. Cruise ship destination speaker.
- * Volunteer teacher in high school equivalency programs for adults. Tutor in mathematics, writing, statistics, music theory, composition.