

**Hidden Victims in Social Work Practice with Traumatized Populations: Predictive Factors  
of Secondary Traumatic Stress for Social Workers in New York City**

By

**Hanae Kanno**

B.A., Tokyo Woman's Christian University, 1997

M.A., Tokyo Metropolitan University, 1999

MSW., University of Pittsburgh, 2006

Submitted to the Graduate Faculty of

The School of Social Work in partial fulfillment

of the requirements for the degree of

Doctor of Philosophy

University of Pittsburgh

2010

UNIVERSITY OF PITTSBURGH

SCHOOL OF SOCIAL WORK

This dissertation was presented

by

Hanae Kanno

It was defended on

May 27, 2010

and approved by

Rachel Fusco, Ph.D., Assistant Professor, School of Social Work

Irene H Frieze, Ph.D., Professor, Department of Psychology

Dissertation Advisors: Gary F Koeske, Ph.D., Professor, School of Social Work

Dissertation Advisors: Christina Newhill, Ph.D., Associate Professor, School of Social Work

**Hidden Victims in Social Work Practice with Traumatized Populations: Predictive Factors of Secondary Traumatic Stress for Social Workers in New York City**

Hanae Kanno, Ph.D.,MSW,MA

University of Pittsburgh, 2010

When social workers empathically engage with their clients' traumatic recollections, they sometimes experience strong emotional reactions, such as grief or rage. These reactions may reflect *secondary traumatic stress*, i.e. negative emotional reactions resulting from knowledge of traumatizing events experienced by others. Many clinical social workers in New York City who provided counseling, debriefing and support to 9/11/01 witnesses, survivors, victims' family members, and rescue workers were at risk for developing secondary traumatic stress, with such risk elevated by their personal experiences of stress during and following the terrorist attacks. This study explored predictive factors of secondary traumatic stress for social workers assisting 9/11/01 clients, including extent of exposure to traumatized clients, and protective factors that were tested as direct and interactive (buffering) influences. These effects were tested controlling for demographic factors (age, marital status, income, hours per week in the field, and years in the field). Data, in which Doctoral and MSW level members of the Manhattan Chapter of the NASW (N=1257) were surveyed, were drawn from the Post 9/11/01 Quality of Professional Practice Survey (Tosone & Moore, 2007), yielding a 38% return rate (N=481). The primary independent variable, exposure to trauma in

practice was measured by a block of three indicators: being 9/11/01 mental health provider/total work hours of exposure to 9/11/01 related events, percent of time working with traumatized clients generally, and number of different types of trauma client worked with. Hierarchical multiple regressions of secondary traumatic stress symptoms included a block of controls, the exposure block, and additional protective variables (receiving supervision, peer support, family and friend support, disaster training before and after 9/11/01) examined separately for their direct and interactive effects with exposure. The results indicated that social workers' level of exposure to traumatized clients significantly increased secondary traumatic stress. Also, peer support marginally buffered the negative consequences of trauma exposure. Further, older and more experienced social workers had somewhat lower levels of secondary traumatic stress, at least in part because they had less exposure to traumatized clients; older and more experienced workers may have been more negatively impacted by exposure to traumatized clients. The results have implications for all direct providers who may experience secondary traumatic stress symptoms: administrators and practitioners in social agencies, clinics, and hospitals; the findings also apply to students in schools of social work who need to learn how to effectively treat traumatized clients.

**TABLE OF CONTENTS**

**ACKNOELDGEMENTS-----XI**

**1.0.INTRODUCTION-----1**

**1.1. PROBLEM STATEMENT-----1**

**1.2. SOCIAL WORK RELEVANCE-----3**

**1.3. PURPOSE OF THE STUDTY-----4**

**2.0.HISTORY AND LITERATURE REVIEW ON SECONDARY  
TRAUMATIC STRESS-----6**

**2.1. HISTORY OF TRAUMA AND OCCUPATIONAL STRESS IN HELPING  
PROFESSIONALS-----6**

**2.1.1. RECOGNITION OF TRAUMA: 1860s-1890s-----6**

**2.1.2. APPERANCE OF COUNTERTRANSFERENCE: 1900s-1950s-----7**

**2.1.3. TRAUMA STUDIES: 1900s-1950s-----8**

**2.1.4. APPEARANCE OF DSM I AND II: 1950s-1960s-----9**

**2.15. INCREASE OF INTEREST IN TRAUMA AND APPEARANCE OF  
BURNOUT: 1970s-----10**

**2.1.6. DEVELOPMENT OF CONCEPTS OF BURNOUT AND PTSD:**

<b>1980s-----</b>	<b>12</b>
<b>2.1.7. APPEARANCE OF TRAUMATIC STRESS FOR TRAUMA</b>	
<b>WORKERS: 1980s-----</b>	<b>14</b>
<b>2.1.8. REVISION FROM DSM-III-R TO DSM-IV: 1990s-----</b>	<b>15</b>
<b>2.1.9. INTEREST IN BURNOUT FOR TRAUMA WORKERS:1990s----</b>	<b>16</b>
<b>2.1.10. INTEREST IN TRAUMATIC</b>	
<b>COUNTERTRANSFERENCE:1990s-----</b>	<b>17</b>
<b>2.1.11. DEVELOPMENT OF CONCEPTS OF TRAUMATIC</b>	
<b>STRESS:1990s-----</b>	<b>18</b>
<b>2.1.12. DIFFERENTIATION BETWEEN SECONDARY TRAUMATIC</b>	
<b>STRESS AND OTHER SIMILAR CONCEPTS: 1995-2000s -----</b>	<b>23</b>
<b>2.1.13. REVISION OF DSM-IV AND INCREASE OF SECONDARY</b>	
<b>TRAUMATIC STRESS STUDIES: 2000s-----</b>	<b>26</b>
<b>2.2. LITERATURE ON RISK AND PROTECTIVE FACTORS AFFECTING</b>	
<b>THE DEVELOPMENT OF SECONDARY TRAUMATIC STRESS FOR</b>	
<b>HELPING PROFESSIONALS-----</b>	<b>29</b>
<b>2.2.1. INDIVIDUAL FACTORS ASSOCIATED WITH SECONDARY</b>	
<b>TRAUMATIC STRESS-----</b>	<b>29</b>

<b>2.2.2. ENVIRONMENTAL/WORK-RELATED FACTORS ASSOCIATED WITH SECONDARY TRAUMATIC STRESS-----</b>	<b>35</b>
<b>2.3. LITERATURE ON SECONDARY TRAUMATIC STRESS FOR WORKERS ASSISTING VICIMS OF SEPTEMBER 11, 2001-----</b>	<b>45</b>
<b>3.0. POLICY FOR WORKFORCE ISSUES OF SOCIAL WORKERS ASSISTING VICTIMS OF DISASTER-----</b>	<b>55</b>
<b>3.1. POLICIES FOR OCCUPATIONAL HAZARD AND STRESS-----</b>	<b>55</b>
<b>3.1.1.FEDERAL POLICY:THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSH ACT) OF 1970-----</b>	<b>55</b>
<b>3.1.2.POLICY OF THE NATIONAL ASSOCIATION OF SOCIAL WORKERS(NASW):PROFESSIONAL IMPAIRMENT-----</b>	<b>57</b>
<b>3.2.DISASTER POLICIES RELATED TO SOCIAL WORKERS’ ISSUES-----</b>	<b>59</b>
<b>3.2.1.FEDERAL POLICY: THE ROBERT T. STAFFORD DISASTER RELIEF AND EMERGENCY ASSISTANCE ACT (THE STAFFORD ACT)-----</b>	<b>59</b>
<b>3.2.2.POLICY OF NATIONAL ASSOCIATION OF SOCIAL WORKERS (NASW):DISASTER-----</b>	<b>60</b>

**4.0. THEORITICAL FRAMEWORK -----63**

**4.1. PSYCHOLOGICAL TRAUMA THEORY-----63**

**4.2. STRESS AND COPING THEORY-----65**

**4.3. SOCIAL SUPPORT TTHEORY-----68**

**4.4. SUMARRY AND INTEGRATION OF THEORETICAL  
APPROACHES-----72**

**4.5. PURPOSE, RESEARCH QUESTIONS AND HYPOTHESES-----73**

**5.0. METHODOLOGY-----79**

**5.1. DATA SOURCE: POST 9/11/01 QUALITY OF PROFESSIONAL  
PRACTICE SURVEY (PQPPS) -----79**

**5.2. SAMPLING PROCEDURES-----79**

**5.3. DATA COLLECTION PROCEDURES-----80**

**5.4. SAMPLE-----81**

**5.5. OPERATIONALIZATION OF VARIABLES-----81**

**5.6. DATA ANALYSIS PLAN-----85**

**6.0. RESULTS-----88**

**6.1. DESCRIPTIVE STATISTICS-----88**

**6.1.1. DEMOGRAPHIC CHARACTERISTICS-----88**



<b>6.1.2. PROFESSIONAL CHARACTERISTICS -----</b>	<b>90</b>
<b>6.1.3. LEVELS OF EXPOSURE TO TRAUMATIZED CLIENTS----</b>	<b>93</b>
<b>6.1.4. LEVELS OF SOCIAL SUPPORT AND TRAINING FOR 9/11/01 TRAUMA WORKERS-----</b>	<b>94</b>
<b>6.1.5. LEVELS OF SECONDARY TRAUMATIC STRESS-----</b>	<b>95</b>
<b>6.2. BIVARIATE CORRELATIONS FOR TEST AND CONTROL VARIABLES-----</b>	<b>97</b>
<b>6.2.1. CORRELATIONS FOR SECONDARY TRAUMATIC STRESS AND TRAUMA EXPOSURE, PROTECTICE, AND DEMOGRAPHIC VARIABLES-----</b>	<b>97</b>
<b>6.2.2. CORRELATIONS AMONG TRAUMA EXPOSURE VARIABLES-----</b>	<b>100</b>
<b>6.2.3. CORRELATIONS BETWEEN TRAUMA EXPOSURE AND PROTECTIVE AND DEMOGRAPHIC VARIABLES-----</b>	<b>100</b>
<b>6.3. MULTIVARIATE ANALYSES-----</b>	<b>102</b>
<b>6.3.1. TEST OF RESEARCH MODEL 1: REGRESSION OF SECONDARY TRAUMATIC STRESS ON TRAUMA EXPOSURE AND DEMOGRAPHICS FOR TOTAL SAMPLE-----</b>	<b>102</b>

<b>6.3.2. FOLLOW-UP ANALYSIS FOR RESEARCH MODEL 1:</b>	
<b>    BUFFERS OF DEMOGRAPHIC VARIABLES-----</b>	<b>104</b>
<b>6.3.3. TEST OF RESEARCH MODEL 2: REGRESSION OF</b>	
<b>    SECONDARY TRAUMATIC STRESS ON DEMOGRAPHICS,</b>	
<b>    PROTECTORS, TRAUMA EXPOSURE, AND INTERACTION</b>	
<b>    EFFECTS FOR SUBSAMPLE-----</b>	<b>108</b>
<b>6.3.4. SUBGROUP ANALYSIS IN PEER SUPPORT GROUP (N=225)</b>	
<b>    VERSUS NON-PEER SUPPORT GROUP (N=27)-----</b>	<b>112</b>
<b>7.0. DISCUSSION AND CONCLUSION-----</b>	<b>114</b>
<b>    7.1. INTRODUCTION AND RESEARCH QUESTION -----</b>	<b>114</b>
<b>    7.2. LEVEL OF SECONDARY TRAUMATIC STRESS AND</b>	
<b>    PARTICIPANTS' CHARACTERISTICS-----</b>	<b>114</b>
<b>    7.3. RISK FACTORS OF SECONDARY TRAUMATIC STRESS -----</b>	<b>116</b>
<b>        7.3.1. DIFFERENT TYPE OF TRAUMA EXPOSURE AND 9/11/01</b>	
<b>        TRAUMA EXPOSURE-----</b>	<b>116</b>
<b>        7.3.2. SOCIAL WORKERS' DEMOGRAPHICS: AGE, YEARS IN THE</b>	
<b>        FIELD, MARITAL STATUS, INCOME, AND HOURS OF DIRECT</b>	
<b>        CONTACT WITH CLIENTS-----</b>	<b>118</b>

<b>7.4. BUFFERS (PROTECTIVE FACTORS) AGAINST SECONDARY TRAUMATIC STRESS</b>	<b>120</b>
<b>7.5. LIMITATIONS OF THE STUDY</b>	<b>122</b>
<b>7.6. IMPLICATIONS BASED ON STUDY RESULTS</b>	<b>123</b>
<b>7.6.1. NEED OF ROTATION SYSTEM</b>	<b>123</b>
<b>7.6.2. NEED OF PEER SUPPORT GROUP</b>	<b>124</b>
<b>7.6.3. WHAT ADMINISTRATORS CAN DO?</b>	<b>124</b>
<b>7.6.4. WHAT SCHOOL OF SOCIAL WORK CAN DO?</b>	<b>130</b>
<b>7.7. CONCLUSION AND RECOMMENDATIONS FOR THE FUTURE RESEARCH</b>	<b>131</b>
<b>7.7.1. CONTRIBUTION AREAS OF RESEDARCH</b>	<b>131</b>
<b>7.7.2. RECOMMENDATIONS FOR THE FUTURE RESEARCH</b>	<b>132</b>
<b>7.7.3. CONCLUSION</b>	<b>135</b>
<b>APPENDIX A:</b>	<b>137</b>
<b>REFERENCES</b>	<b>148</b>

**LIST OF TABLES**

Table 1 Demographic Characteristics-----88-89

Table 2 Professional Characteristics-----90

Table 3 Case Type----- 92

Table 4 Mean Scores of Length in Practice and Supervision-----93

Table 5 Mean Scores of Exposure to Traumatized Populations-----94

Table 6 Social Support and Training for 9/11/01Mental Health Providers-----95

Table 7 Summary of Descriptive Results in All of the Non-Dichotomous Variables----96

Table 8 Bivariate Correlations for Test and Control Variables-----99

Table 9 Regression of Secondary Traumatic Stress on General Trauma Exposure and Demographics (N=373)-----103

Table 10 Subgroup Analyses based on Demographic Variables on Research Model I-----106-108

Table 11 Regression of Secondary Traumatic Stress on Trauma Exposure, All Protectors, Interaction Effects of Peer Support and Trauma Exposure, and Demographics (N=225)-----111

Table 12 Regression of Secondary Traumatic Stress on Trauma Exposure, BRI, Interaction Effects of BRI and Trauma Exposure, and Demographics (N=242)-----112

Table 13 Regression of Secondary Traumatic Stress on Exposure to Traumatized Clients in Peer Support Group (N=225) versus Non-Peer Support Group (N=27)-----113

**LIST OF FIGURES**

Figure 1 Predictors of Secondary Traumatic Stress for Social Workers in New York  
City-----77

Figure 2 Predictors of Secondary Traumatic Stress for Social Workers Assisting  
9/11/01Victims-----78

## **ACKNOWLEDGEMENTS**

I thank all those individuals whose assistance, support, and guidance contributed to this thesis. I especially thank my dissertation co-chairs, Dr. Gary F. Koeske and Dr. Christina Newhill, for their patience and feedback during this research project. Both Dr. Koeske and Dr. Newhill always accepted and respected my ideas and the directions I chose to take in this thesis. Throughout my doctoral work, Dr. Koeske trained me in research and statistical skills; he also encouraged me to think more analytically and to scientifically validate my research results. Because he creates an equal relationship of humor and warmth with his students, I felt free to extend my research agenda. Furthermore, by admiring my creativity and evaluation skills, Dr. Koeske filled me with confidence. Dr. Newhill, whose article on client violence led me to the University of Pittsburgh School of Social Work, always encouraged me; under her auspices, I again felt free to study areas that interested me. Her insightful and thoughtful feedback greatly contributed to improving the theory and literature review sections for this project. Because of her deep understanding of workforce issues in social work practice, I have felt comfortable sharing and discussing my opinions with Dr. Newhill. I also thank the other doctoral committee members: Dr. Rachel Fusco in the School of Social Work and

Dr. Irene Frieze in the Psychology Department. Both took their time to provide insightful and helpful comments on this project. I thank the late Dr. Randi Koeske, a former faculty member of the University of Pittsburgh Greensburg Psychology Department with whom I worked during the summer 2007; even before I started this project, she shared with me her thoughts on the issue of secondary trauma and burnout in social work practice.

I thank Dr. Carol Tosone from the New York University Silver School of Social Work who allowed me to use her data set from her study of New York City Social Workers. I thank Dr. Brian Bride from the University of Georgia School of Social Work who introduced me to Dr. Charles Figley from the Tulane University School of Social Work, and I thank Dr. Figley who introduced me Dr. Tosone and her study at the 2009 Annual Conference of the Society for Social Work and Research in New Orleans, LA. I admire and respect all of these professors and their contributions to the study of secondary trauma in the United States. Without their insights on secondary trauma study, I could not have produced this project.

I also thank my mentors and advisors at the University of Pittsburgh whose support, encouragement, and guidance not only helped me on my research project, but will also help me in my future career as an academician: Dr. Amy L Ai, Dr. Daniel

Rosen, and Dr. Hidenori Yamatani in the School of Social Work and Dr. Akiko Hashimoto in the Department of Sociology. I thank Professor Timothy S. Thompson at the University Center for International Studies who motivated me during my journey to achieve both my Master's degree and PhD.

I thank all of the counselors and advocates at the Center for Victims of Violence and Crime (CVVC) in Pittsburgh who became the gatekeepers for exploring this thesis topic on secondary trauma. In particular, I appreciate and respect Stephanie L. Walsh, the Executive Director of the CVVC, and her work with the counselors and advocates of those populations suffering from secondary traumatic stress. Both Stephanie and Tracy L. Provident, the Associate Director of the CVVC, encouraged me to speak about secondary trauma issues with all of the counselors and advocates in the CVVC at their in-service training day in 2008. I thank Deborah McManus and Jamie Vanepps, my supervisors during my CVVC internship, who continued to encourage me as I pursued my doctoral education.

I thank all of my friends in Pittsburgh for their prayers, support, and encouragement: Ruth, Danny, Andy, and John from my Pitt and CMU graduate Bible study group; Barbara, Timmy, and Joanne from the Church of Ascension; and Karen who not only lived in my building but who also shared the challenges and joys of social



work academia.

I thank all of my professors in Japan who encouraged me and motivated me to embrace a career as an academician. Professor Akemi Soeda, a teacher in the Department of Social Studies Tokyo Metropolitan University, guided me to become a social work researcher when I was a graduate student at the Tokyo Metropolitan University. Even after I moved to the United States, Professor Soeda continued to support me and listen to my concerns. I thank all of the faculty members of the Tokyo Woman's Christian University in Japan. These individuals provided me with a strong foundation in women's studies, which led me to the field of social work as an academician and social advocate/activist. All of female faculty members empowered me to live my life as an independent woman through their passionate feminism/gender education.

I thank my many friends in Japan who continued to support me with their good wishes throughout my master and doctoral education in the United States: Professor Yachiyo Sudo of the Aichi Prefectural University Department of Social Work, Takamitsu Iwaishi, a journalist and an ex-chief-editor in the Journal of American Medical Association in Japan, Tomoko and other choir members from the Tokyo Woman's Christian University; and Yuka and other members of the St. Margaret Church,

a Japanese Episcopal Church in Tokyo, Japan.

I send special thanks to my Kanno family: my father, Akira Kanno, my mother, Yanagi Kanno, and my older sister, Maiko Kanno. I appreciate their continuous patience, support, and encouragement during both master and doctoral education in the United States. Without their love and understanding, I may not have been able to earn my advanced degrees.

I thank my late grandmothers, Yuki Ishihara and Michiko Kanno. Yuki took care of me in my childhood, and Michiko introduced me to the Japan Christian Women's Organization. I am grateful to the late Utako Hayashi, Michiko's mother's sister, a social worker who founded the orphans' home, *Hakuaisha*, in Osaka, Japan, as a way to protect the war orphans. As a social/feminist activist, Utako also advocated for women's rights.

Finally, I thank God for bringing me to the United States, leading me down the road I have chosen, and giving me His power and protection. With God's help, I am confident that I will achieve the missions He gave me as a social work researcher, educator, and social advocate/activist who protects the rights of any type of victimized population in society.

## **1.0. Introduction**

### **1.1. Problem Statement**

According to the Code of Ethics of the National Association of Social Workers (NASW, 2008), the social work profession is committed to the needs of populations who are vulnerable, oppressed, and disadvantaged. Many of the populations served by social workers have experienced some form of trauma, either resulting from witnessing or directly experiencing an event that involves actual or threatened death or serious injury, or other threat(s) to one's physical integrity (American Psychiatric Association, 2000). Such traumatic events include being a victim of various types of disaster (man-made disasters such as war or terrorist attacks or natural disasters such as hurricanes or tornadoes), child abuse and neglect, domestic violence, or sexual assault (American Psychiatric Association, 2000). Part of a social worker's job is to assist traumatized populations in discussing their experience and working through their feelings. When social workers empathetically engage with their clients' traumatic stories or materials, the social workers may at times re-experience these images as clearly as their own internally generated ones (Canfield, 2005). After repeatedly hearing about the torture, humiliation, and betrayal people perpetrate against one another, the social workers might react with grief or rage. These strong emotional reactions can lead to occupational stress symptoms such as secondary traumatic stress, vicarious trauma, compassion fatigue, countertransference, or burnout.

While all helping professionals are vulnerable to the symptoms of occupational stress, research indicates that "secondary traumatic stress" is emerging as a challenge for those dealing with traumatized populations. According to Figley (1999), secondary traumatic stress is "the natural, consequent behaviors and emotions resulting from knowledge about a traumatizing event experienced by a significant other" (p.10). Secondary traumatic stress shares many of the same

characteristics as those of Post Traumatic Stress Disorder (PTSD): intrusion, avoidance, and arousal (Figley, 1999; American Psychiatric Association, 2000).

Those social workers with secondary traumatic stress face psychological health problems if their stress is not recognized and dealt with quickly and appropriately. These health issues range from minor emotional disruptions to more serious suicidal ideation (Harris, 1995). Furthermore, secondary traumatic stress may prevent social workers from working effectively (Harris, 1995). As a result, secondary traumatic stress may lead to a high turnover in the workplace, thereby leaving organizations functioning with inadequate staffing (Baird & Jenkins, 2003; Beaton & Murphy, 1995; Harris, 1995). By lowering the incidence of secondary traumatic stress symptoms, organizations may be able to recruit and retain more experienced staff and, therefore, better serve traumatized populations (Sexton, 1999).

The development of secondary traumatic stress resulting from contact with traumatized clients turns social workers into indirect victims of trauma (Figley, 1995) or “hidden victims” of trauma (Stewart & Hodgkinson, 1990). According to the Occupational Safety and Health Act (OSHA of 1970), social workers have a right to work in conditions conducive to good physical and mental health. Without proper protection, some of these social workers may experience an increase in their stress symptoms, leading to job turnover and a lack of support for the traumatized populations (Bearon & Murphy, 1995; Canfield, 2005; Gentry, Baranowsky, & Dunning, 2002; Harris, 1995).

The terrorist attacks of 9/11/01, exemplify the syndrome of secondary traumatic stress. In this man-made disaster, terrorists hijacked jets crashed into the Twin Towers of the World Trade Center and the Pentagon, killing an estimated 3,000 people (more than 250 were passengers on the doomed flights) (Saltonstall, 2001). The results of the 9/11/01 attacks, far more catastrophic

than any chemical bomb planted in the buildings might have been (Woodward, 2001), affected all Americans, especially those living in New York City. Direct witnesses to the attacks experienced a range of emotions: shock, fear, grief, disbelief, lingering hope, and a burning desire for revenge (Freedly & Donkervoet, 1995; Maeder, 2001).

To assist the witnesses and survivors of 9/11/01 required the efforts of many clinical social workers in New York City. These health professionals provided counseling, debriefing, and support to witnesses, survivors, family members of victims, and rescue workers (Boscarino, Figley, & Adams, 2004; Naturale, 2007). Because the social workers in New York City had been exposed to the same disaster as their clients, they faced unique challenges in supporting their clients. Hearing their clients' traumatic experiences awakened within the clinicians their own traumatic stress and concerns about the 9/11/01 event. Those social workers who may have suffered from occupational stress symptoms, such as secondary traumatic stress, may have become ineffective in their jobs; some may also have resigned, leading to job turnover.

An examination of the social workers in New York City provides a better understanding of secondary traumatic stress since most of the social workers in New York City might have assisted those victims of the 9/11/01 events. Therefore, this study 1) explored the predictive factors of secondary traumatic stress for the social workers in New York City and 2) used those factors to suggest preventive strategies to be implemented in the field of social work.

## **1.2. Social Work Relevance**

Due to the nature of their job, social workers tend to meet with traumatized populations in their everyday practices. These populations include survivors of war and terrorism, natural disasters, childhood abuse, domestic violence, and violent crime (Bride, 2007). To help this population who has suffered some kind of trauma, social workers often provide therapy or

counseling, advocacy services, provision of shelter resources, and ways to gain public assistance. The more exposure social workers have to traumatized individuals, the more likely they are to experience secondary traumatic stress. Data dealing with the New York social workers after 9/11/01 validate this theory. A study of New York City social workers with an MSW degree or higher shows that about 70% of the social workers were moderately to extensively involved with counseling people affected by the 9/11/01 event, while approximately 40% were moderately to extensively involved with the recovery efforts after the 9/11/01 event (Boscarino, Figley and Adams, 2004). Therefore, secondary traumatic stress can now be considered a critical issue in social work practice, in particular for social workers in New York City.

### **1.3. Purpose of the Study**

The current study focuses on one of the most recent traumatic man-made disasters, the 9/11/01 event, which has led to an increasing interest of secondary traumatic stress within the mental health field. Specifically, the purpose of the current study is to identify the factors associated with secondary traumatic stress that affected those social workers in New York City. Social workers with secondary traumatic stress might show a decrease in psychological well-being and job effectiveness; constant work with victimized clients can also lead to job turnover (Sullivan, 2003). To decrease the incidence of secondary traumatic stress for a social worker, it is essential for researchers to identify the factors associated with secondary traumatic stress. In my research, therefore, I address the following three questions: a) What are the risk factors associated with an increased level of reported secondary traumatic stress for social workers in New York City? b) What are the protective factors of decreasing the level of secondary traumatic stress for social workers assisting the victims of 9/11/01? and c) How do the protective factors contribute to buffering those risk factors that decrease the level of secondary traumatic stress for

social workers who assisted the victims of 9/11/01? This study has an explanatory research purpose based on the theories of psychological trauma, stress and coping, and social support. Since this current study uses a sample of social workers in New York City to identify the factors associated with secondary traumatic stress, it is hoped that the study will be useful for administrators in social agencies, clinics, or hospitals who not only continue to assist the victims of 9/11/01, but who also help individuals victimized by any other type of man-made or natural act of violence. This research is also relevant for 1) social workers who want to learn self-care strategy to prevent secondary traumatic stress and 2) agencies that want to create and implement secondary traumatic stress preventive policies and programs.

## **2.0. History and Literature Review on Secondary Traumatic Stress**

### **2.1. History of Trauma and Occupational Stress in Helping Professionals**

#### **2.1.1. Recognition of Trauma: 1860s-1890s**

Although the term *trauma* appeared as early as the 1860s, it initially only applied to cases of physical trauma. John Erichse, a British physician (1866, 1886), was the first to identify the trauma syndrome in victims suffering from the fright of railway accidents. Herman Oppenheim (1889), a German neurologist, also used the term “traumatic neurosis” as a way to describe the symptoms related to undetectable organic changes in the brain. Physicians and others in the healthcare industry have used the term trauma to better understand psychic injury. In particular, psychological explanations for traumatic neuroses helped describe the frequent occurrence of cardiovascular symptom, called “cardiac neurosis, irritable heart, and soldiers’ heart” (Myers, 1870; Da Costa, 1871), in combat soldiers. In 1881, American neurologist James J. Putnam developed the notion of psychic traumatization as an illness by perceiving this traumatization as a functional regression toward earlier and more simple, reflective, and automated modes of functioning (Putnam, 1898).

Based upon traumatic stress studies, Pierre Janet and Sigmund Freud, both psychiatrists in the late 1800’s, coined the term “trauma” as a psychic injury (Janet, 1889; Masson, 1985). Specifically, Pierre Janet found an association between a childhood traumatic experience and what was termed “hysteria” in women (Janet, 1889). In addition, Janet was the first to investigate the relationship between dissociation and psychological trauma based on his observation of alterations in consciousness in hysterical patients (Janet, 1889). Janet described those people who experienced traumatic events as having the symptoms of dissociation, abreaction, avoidance, and emotional arousal due to strong emotions; the inability of such individuals to integrate the



traumatic event forms the basis of current trauma theory (Janet, 1889).

Freud, influenced by the research of Janet, also studied women with hysteria. As a result of his study, he asserted that child sexual abuse causes neuroses. Freud defined these early childhood sexual abuse experiences as trauma that can lead to hysteria. After listening to his female clients report histories of sexual abuse, particularly from their fathers, Freud then postulated that his female patients' neuroses resulted from this childhood sexual violence and abuse. Claiming that childhood sexual abuse histories formed the cause of hysteria, Freud developed "the seduction theory" based on these clinical reports. In 1886, Freud revealed these findings through his paper presented at the Society for Psychiatry and Neurology. However, whether because of adverse public opinion or the need to salvage his fledgling career as a psychiatrist, within 18 months Freud denied his seduction theory and instead posited that his female patients' reports of child sexual abuse were repressed wishes and/or flights of sexual fantasy; he called this the "Oedipal Theory." Because this approach was more acceptable to his colleagues, the study of sexual trauma and its psychological effects lay under a collective shadow until the middle of the 20<sup>th</sup> century (Davies & Frawley, 1994; Masson, 1985).

### **2.1.2. Appearance of Countertransference: 1900s-1950s**

To describe those clinicians experiencing feelings due to their patients' influence on their unconscious, Freud (1910) also developed the concept of *countertransference*. Freud (1910, 1913) viewed countertransference as more of a barrier to effective psychoanalysis and as a reflection of the analyst's life experience; he acknowledged that people have their own unconscious that allows them to interpret the utterances of the unconscious of other people (Freud, 1910, 1913). From the 1930s-1950s, other researchers supported Freud in considering countertransference as a therapist's unconscious, pathological, and interpersonal reaction to a

client with psychological trauma or life difficulties; they further viewed countertransference as a formidable obstacle to overcome (Fleiss, 1953; Reik, 1937). Since the 1950s, extensive conflicting literature has emerged on countertransference. Heimann (1950), for instance, challenged the classical Freudian view, arguing that countertransference was a therapist's total response, both conscious and unconscious, to the client and a vital analytic tool in understanding unconscious and interpersonal issues in the client's everyday life.

### **2.1.3. Trauma Studies: 1900s-1950s**

Despite researchers like Janet and Freud who continued to investigate and discuss dissociation and trauma at the turn of the century, a period of disinterest on trauma occurred, resulting in little study on the topic. In the beginning of the 1990s, only a few trauma studies were conducted (Van der Kolk, McFarlane, & Weisaeth., 1996; Herman, 1992; Hilgard, 1986). Edouard Stierlin, the Swiss psychiatrist and the first researcher in disaster psychiatry, studied earlier calamities such as an earthquake in Messina, Italy, in 1907, which killed 70,000 of the town's inhabitants (Stierlin, 1909, 1911, cited in Van der Kolk, Weisaeth, & Van Der Hart, 1996). He found that a substantial proportion of the victims from the earthquake developed long-lasting Post Traumatic Stress Disorder (PTSD) symptoms, while 25% of the survivors suffered from sleep disturbances and nightmares. After World War II, several trauma investigations studied the long-term effects of trauma in survivors of World War II (Archibald & Tuddenham, 1956; Ferenczi, 1955; Freud & Burlingham, 1944; Helweg-Larsen et al., 1952; Strecker & Appel, 1945). For example, a study by Freud and Burlingham (1944) provides anecdotal material about young children exposed to the trauma of World War II in England. These researchers found that children, either shocked by bombings and living in shelters or shocked by the dissolution of their families due to the loss of a parent, experienced such negative psychological reactions as anxiety

or mental maladjustment. Archibald and Tuddenham (1956), who studied survivors of Japanese concentration camps in World War II, found similar occurrences of stress. The survivors of the concentration camp had extreme trauma which resulted in severe biological, psychological, social, and existential consequences, including a diminished capacity to cope with both psychological and biological stressors later in life.

#### **2.1.4. Appearance of DSM I and II: 1950s-1960s**

To counteract the dearth of studies on trauma, a United States Public Health Service and the American Psychiatric Association developed the 1952 Diagnostic and Statistical Manual, Mental Disorders (DSM-I). DSM-I frequently used the term “reaction” to reflect the psychoanalytic belief that many psychiatric diseases were reactions to environmental stresses. Based upon the experiences of psychiatrists and their work with World War II soldiers whose symptoms subsided once they left combat, the DSM-I conceptualized trauma symptoms as neurotic conditions and categorized trauma as “Gross Stress Reaction” (APA, 1952). This category recognized that an identifiable stressor could generate reactions and symptoms in a normal person under conditions of great or unusual stress. The first edition of the DSM focused on two particular stresses specified as (1) combat and (2) civilian catastrophe (fire, earthquake, exposition, etc.) (APA, 1952).

The American Psychiatric Association published the second edition of the Diagnostic and Statistical Manual, Mental Disorders (DSM-II) in 1968 at the height of the Vietnam War’s Tet Offensive. During that historic period, mental health professionals were beginning to see delayed stress reactions within the Vietnam War veterans (Boulanger, 1985). However, the DSM-II removed “gross stress reaction” from its nomenclature. Scott, a sociologist, attributes this omission to the military psychiatrists’ lack of input or representation on the APA committee that

wrote the DSM-II draft. While some specialists asked the APA committee to recognize the “delayed” and “chronic” symptoms of gross stress reaction of concentration camp survivors, others claimed that the delayed and chronic symptoms by the survivors represented just one of many “adjustment reactions to adult life” (Scott, 1993). Therefore, although psychiatrists recognized that returning Vietnam veterans suffered from sleep disturbances, startle reactions, or flashbacks, these veterans did not receive benefits from the government because they had not been diagnosed as having a combat-related disorder based on DSM-II (Scott, 1993). Members of other medical professions and the general public attacked those psychiatrists who argued against the status quo for their radical diagnostic techniques. Since the Vietnam veterans with combat reactions could not get adequate treatment by mental health professionals, many of the veterans became addicted to drugs and alcohol to cope with their combat reactions (Williams, 1980). However, by perceiving a degree of delayed stress and an extremity of action that had not been reported in previous wars (Figely & Leventman, 1990), many psychiatrists, despite the absence of a listing in DSM-II, still considered war neurosis with its gross stress reaction as diagnostically valid and useful. In 1969, Dr. John Talbott, who had served in Vietnam as a psychiatrist, critiqued DSM-II and recommended that the future editors of DSM-III reintroduce the gross stress reaction listing.

#### **2.1.5. Increase of Interest in Trauma and Appearance of Burnout: 1970s**

The 1970s saw an increased interest in trauma due to those Vietnam War veterans who returned home with reports of hyperarousal, intrusive recollections, and other stress-related symptoms (Haley, 1974, 1978; Figley, 1978). However, President Richard Nixon and his administration were not particularly interested in the problems of these veterans. The GI Benefits (Education Assistance Programs by the Department of Veteran Affairs) had a smaller budget

when compared with the financial situation after World War II. In constant dollars, therefore, the benefits paid to Vietnam veterans were less than half of those allotted to World War II veterans through the GI Bill (Moskos, 1981). Post-Vietnam America saw crowded hospitals that made the successful treatment of veterans and their symptoms almost impossible. As a result, in the late 1970s, many veterans filed claims that led to a series of important court cases demanding more educational benefits for the Vietnam veterans (Phillips, 1990). The veterans also formed veteran activist groups that worked to stop the war and treat the wounded. These veteran activist groups faced civil lawsuits concerning compensation for damage to veteran health and/or ability to work and veteran access to proper medical treatment, benefits, and legal resources. Many veterans who became involved in healthcare issues turned their attention to developing a uniform description of mental disorders suffered by Vietnam veterans; not only did they work on including the war-related stress for the DSM-III, but they also provided scientific data to justify the diagnosis.

The same period experienced the second wave of the Women's Movement in the United States. Feminism increased the attention paid to sexual assault as well as trauma resulting from sexual assault and abuse. In 1974, Ann Burgess and Linda Holstrom first described the "rape trauma syndrome," noting that women viewed rape as a life-threatening event; some of the victims' symptoms resembled those previously described in combat veterans. Because of feminism, researchers began documenting (Herman, 1992) women's traumatic responses to childhood abuse, sexual violence (including incest) (Herman & Hirschman, 1977), and domestic violence ("battered women syndrome") (Walker, 1977).

In the 1970s, researchers also began paying attention to the occupational stress experienced by those staff members working in such fields as crisis intervention; this stress results from the interaction between the staff and the traumatized or difficult clients. Researchers recognized this

occupational stress as *burnout*, a term Freudenberger (1974) introduced after observing his staff working in crisis intervention institutions, free clinics, and self-help groups. Freudenberger described symptoms of exhaustion and fatigue accompanied by a variety of somatic complaints, quickness to anger, suspicion, excessive rigidity, negative attitude, and depression (Freudenberger, 1974). After Freudenberger (1974), Maslach (1976) operationalized burnout in her studies of human service workers and daycare providers (Maslach & Pines, 1977). Pines and Maslach (1978) noted that burnout most commonly occurs in demanding work that requires intense care for clients. Maslach (1978) further described burnout as a syndrome that could result in psychological and physical fatigue, as well as disengagement from and disillusionment in a chosen field of work.

#### **2.1.6. Development of Concepts of Burnout and PTSD: 1980s**

In the late 1980s, Maslach (1982) elaborated on the nature of burnout by defining burnout as “a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among helping professionals. Burnout is a response to the chronic emotional strain of dealing extensively with other human beings, particularly when they are troubled or having problems” (p.3). Maslach and Jackson (1981) developed the Maslach Burnout Inventory (MBI), a measure of burnout that consists of three primary features of the burnout construct: emotional exhaustion, depersonalization, and reduced perceptions of personal accomplishment (Maslach and Jackson, 1981). Maslach and Jackson (1981) found a strong correlation between difficult client problems and the time spent in the direct care of clients with increased burnout. Researchers agree that the most salient features associated with burnout are client problems, including chronicity, acuity, and complexity, which are beyond the coping abilities of the professional (Freundenberger, 1974, 1975; Maslach, 1976, 1982; Maslach & Jackson, 1981).

However, other researchers later argued that burnout seemed to be much more related to environmental stressors like role ambiguity and workload than to stressors related to clients (Duquette, Kerouac, Sandhu, and Beaudet, 1994; Firth, McKeown, McIntee, and Britton; 1986, 1987). For instance, Firth et al (1986, 1987), who studied 200 nurses from medical units in general, psychiatric, and mental handicap hospitals within one health district in the United States, found that role ambiguity correlated positively with burnout in nurses.

Just as researchers focused on burnout, so did they begin to investigate Post Traumatic Stress Disorder (PTSD). With Vietnam veteran activist groups demanding better medical treatment and benefits and supporters of the Women's Movement demanding equality, Post Traumatic Stress Disorder entered the Diagnostic and Statistical Manual of Mental Disorders-3<sup>rd</sup> Edition in the 1980s (DSM-III) (Herman, 1992). After considerable research, PTSD was recognized as a common psychological consequence of the trauma of military combat among Vietnam veterans and the trauma of sexual assault among female victims of rape and battering (Astin, Lawrence, & Foy, 1993; Herman, 1992; Wilson, 1989).

These changes led to DSM-III, which was more developed as a whole than DSM-II and more rooted in empirical evidence. For instance, whereas the DSM-II was based on the traditional division of neuroses and psychoses and focused on theoretical reasons for the disorder, the diagnostic categories in DSM-III were based on criteria sets and focused on observation of a patient's physical and psychological symptoms and an assessment of the severity of stressors. Although DSM-I conceptualized trauma symptoms as neurotic conditions (APA, 1980), DSM-III classified PTSD as an anxiety disorder. The DSM-III transformed notions of stress, acknowledged that stress responses were no longer restricted to acute responses, and recognized that traumatic events can lead to long-term changes in people and also negatively interact with

other forms of distress, such as depression (Brett, 1996). While the earlier diagnosis of Gross Stress Reaction defined the stressors producing the symptoms as only combat or civilian catastrophe, DSM-III expanded the definition of the stressors to include rape or assault, military combat, natural disasters (floods, earthquakes), accidental man-made disasters (car accidents, airplane crashes, large fires), or deliberate man-made disasters (bombing, torture, death camps) (APA, 1980).

In 1987, the revisions of DSM-III led to DSM-III-R (1987) with its more sophisticated language, more precise definitions, and more specific reactions to trauma. In DSM-III, the most common trauma involved one of the following: 1) serious threat to one's life or physical integrity; 2) serious threat or harm to one's children, spouse, or other close relatives and friends; 3) sudden destruction of one's home or community; or 4) seeing another person who has recently been, or is being, seriously injured or killed as the result of an accident or physical violence. DSM-II-R extended the definition of trauma to include those cases in which a person learns about a serious threat or harmful act done to a close friend or relative, e.g., that one's child has been kidnapped, tortured, or killed (APA, 1987). In terms of duration of the disturbance, DSM-III-R clarified that the diagnosis should not be made if the disturbance lasts less than one month. While DSM-III distinguishes acute and chronic PTSD, the revised edition, DSM-III-R, erases the distinction. In addition to focusing on PTSD, DSM-III-R deals with "Brief Reactive Psychosis" (one set of psychotic symptoms lasting at least a few hours but less than a month and with an eventual return to a premorbid level of functioning).

#### **2.1.7. Appearance of Traumatic Stress for Trauma Workers: 1980s**

As the studies of direct exposure to trauma increased, researchers in the 1980s began to recognize the unique effects that direct exposure to traumatic events have on therapists (Figley,



1983 & 1988; Sparks, 1982). Figley (1983) indicated that therapists who provide direct service to families traumatized by the victimization of a family member can experience traumatic stress symptoms similar to those of the traumatized victims; Figley later called this *secondary traumatic stress/compassion fatigue*. The more this problem is recognized, the more researchers have begun to investigate how this phenomenon impacts the personal and professional aspects of the lives of therapists who work with trauma survivors (Coutois, 1988 & 1993; Figley, 1988).

#### **2.1.8. Revision from DSM-III-R to DSM-IV: 1990s**

When DSM-III-R was further revised in the 1990s, it created the definition of the traumatic event that is now in DSM-IV (1994). DSM-IV included more detailed definitions about traumatic events such as child-specific events, witnessed events, or events experienced by others. Also, DSM-IV specified the onset and duration of the symptoms of PTSD in terms of acute, chronic, or delayed. Furthermore, DSM-IV replaced DSM-III-R's "Brief Reactive Psychosis" with "Brief Psychotic Disorder" and included "Acute Stress Disorder" (the development of anxiety, dissociative characteristics, and other symptoms that occur within one month after exposure to an extreme traumatic stressor) as another disorder type from a stressor (APA, 1994).

Although the concept of trauma shares similarities with the diagnosis of PTSD, trauma differs from PTSD in terms of diagnosis. The Diagnostic and Statistical Manual IV (APA, 1994) recognizes PTSD with Acute Stress Disorder and Brief Psychotic Disorder; all include the occurrence of a stressor as part of the diagnosis. However, trauma exposure may or may not result in PTSD. Unlike other anxiety disorders, a diagnosis of PTSD requires that 1) the individual experience a traumatic or catastrophic event that involves threat of death or serious injury to self or others (APA, 1994) and 2) the person's response at the time of the trauma involves intense fear, helplessness, or horror (APA, 1994, p.428). These two requirements

comprise the Criterion A component of PTSD. Additional criteria for the diagnosis are separated into three clusters: Criterion B – intrusive symptoms that involve re-experiencing the traumatic event; Criteria C - withdrawal symptoms that involve avoidance and numbing responses; and Criteria D - symptoms of arousal. To meet the criteria for PTSD, one or more intrusive symptoms, three or more withdrawal symptoms, and two or more arousal symptoms must be present. DSM-III-R also described Criterion E as the duration of the disturbance (symptoms in B, C, and D) of at least one month. While DSM-IV incorporated DSM-III-R's Criteria A-E, it added Criterion F (the disturbance must cause clinically significant distress or impairment in social, occupational, or other important areas of functioning).

#### **2.1.9. Interest in Burnout for Trauma Workers: 1990s**

The decade of the 1990s saw an increase in the number of studies focusing on occupational stress in those helping professionals working with such trauma victims as Holocaust survivors, Vietnam veterans, and sexual assault survivors (Bergmann & Jucovy, 1990; Courtois, 1993; McCann & Pearlman, 1990; Pearlman & Saakvitne, 1995). Burnout research revealed that helping professionals who work with trauma survivors are unique in terms of their distribution of burnout subscale scores. The studies indicated that although personal accomplishment scores remained stable, emotional exhaustion and depersonalization scores were higher and more compact than the normative human service sample; thus, burnout might be unique among those who provide services to trauma survivors (Edwards & Miltenberger, 1991; Savicki & Cooley, 1994). Also, other evidence suggested that a client's unresolved trauma, auditory witness to the details of traumatic client material, and global emotional reactions to abuse appear to increase the worker's vulnerability to burnout (Aguilera, 1995; Brown & O'Brien, 1998; Maslach and Leiter, 1997; Neumann & Gamble, 1995; Savicki & Cooley, 1994).

**2.1.10. Interest in Traumatic Countertransference: 1990s**

In addition to exploring burnout in those helping professionals working with trauma survivors, researchers in the 1990s also studied the countertransference process specific to trauma treatment (Herman, 1992; McCann & Pearlman, 1990; Pearlmann & Saakvitne, 1995). These later studies are rooted in earlier ones. For example, Danieli produced a groundbreaking study (1981, 1984) on therapists' reactions to clients who had survived the Holocaust. Through an interview with 61 clinicians working with Holocaust survivors, Danieli (1981, 1984) found that the clinicians with the Holocaust survival experience more frequently defended themselves against listening to the Holocaust experiences of their clients when compared to the clinicians with non-victim experience of the Holocaust; these clinicians reported 49 countertransference themes such as defensiveness, numbing, denial, avoidance, and overidentification in response to the survivors' stories. In another study, Benedek (1984) focused on the countertransference feelings of the clinicians' work with victims of natural and human disasters. He (1984) found that common therapist responses to working with the victims were crying, rage, shame, guilt, fear of offering premature interpretations or unrealistic recommendations, and activation of a therapist's own unresolved trauma. In his study on therapists working with Vietnam veterans suffering from PTSD (1987), Lindy (1987) found similar countertransference themes as Danieli's Holocaust countertransference themes (1981, 1984) in the clinicians working with Vietnam veterans suffering from PTSD. For instance, Herman (1992) provided a comprehensive look at "traumatic countertransference." After describing the contagious effect that results from the therapist hearing a client's traumatic story and the resultant challenge to the therapist's basic beliefs, Herman emphasized the inevitability of countertransference reactions, especially in therapists working with traumatized patients. Herman (1992) described how the therapist's identification with the victim's rage may disempower the client by preempting the client's anger with the

therapist's own.

Also, Wilson and Lindy (1994) asserted that trauma survivors evoke special countertransference responses in their therapists; a client with PTSD unconsciously relates to the therapist in ways that involve unresolved aspects of the traumatic event. The researchers noted several different elements of trauma countertransference in trauma therapists: objective (cognitive and affective reactions in response to the trauma story of the clients) and subjective (personal reactions from the therapist's own life experiences or unresolved issues). The objective or subjective reaction triggers a defensive style of either avoidance (denial or detachment) or over-identification (idealization or guilt) based on the clinician's unique characteristics.

Several other trauma researchers (Davies & Frawley, 1994; Figley, 1995; Maroda, 1991; Pearlman & Saakvitne, 1995; Sexton, 1999) outlined trauma specific reactions similar to these writers' description of defensive reactions; they asserted that these types of reactions can lead to empathetic strain. Through those studies of trauma specific countertransference, Pearlman and Saakvitne (1995) defined countertransference as having two components: 1) "affective, ideational and physical responses therapists have to their client, their clinical material, transference and reenactments," and 2) "therapists' conscious and unconscious defenses against the effects, intrapsychic conflicts, and associations aroused by the former."

#### **2.1.11. Development of Concepts of Traumatic Stress: 1990s**

Despite the usefulness of Maslach's burnout construct for assessing burnout or countertransference, other tools are needed to determine the occupational stress unique to those helping professionals who work with traumatized populations. Research findings have indicated that many of the effects observed in professionals resembled the traumatic stress effects reported by the survivors with whom they worked (Courtois, 1993; McCann & Pearlman, 1990; Pearlman

& Saakvitne, 1995). McCann and Pearlman (1990) and Pearlman and Saakvitne (1995) suggested that all therapists who work with survivors of various types of victimization are at risk for experiencing work related stress reactions. Therefore, once researchers found new ways to assess occupational traumatic stress specific to helping professionals working with traumatized populations, they then created the term and the scale of vicarious trauma, compassion fatigue, or secondary traumatic stress.

### ***Appearance of Vicarious Trauma***

McCann and Pearlman (1990) coined the term *vicarious trauma* as one type of traumatic stress specific to trauma workers. Vicarious trauma is defined as “disruptions to important beliefs that individuals hold about themselves, other people, and the world, and the process through which the trauma therapist’s cognition and inner experience is negatively transformed as a result of empathetic engagement with the clients’ traumatic material” (McCann & Pearlman, 1990; Pearlman, 1999; Pearlman & Saakvitne, 1995); it includes accounts of violence, rape, or childhood sexual abuse (Herman, 1997). Vicarious trauma results when disruptions to cognitive schemas manifest in five areas, each of which represents a psychological need: safety, trust, esteem, intimacy, and control (Canfield, 2005; Pearlman & Saakvitne, 1995). Trauma researchers described pervasive changes in those cognitive schemas that occur within clinicians over time as a result of working with clients who have experienced trauma (McCann and Pearlman, 1990; Pearlman & Saakvitne, 1995). The symptoms of vicarious trauma include the following: safety concerns, sensory imagery disruptions, difficulties with relationships, distrust of others, changes in world-view, and tendencies to withdraw from primary relationships (Harris, 1995; Pickett, 1999; Van der Water, 1996). The Constructivist Self-Development Theory of McCann and Pearlman (1990) was used to create the Trauma Stress Institute Belief Scale (TSI Belief Scale)

(Pearlman and Mac Ian, 1995; Pearlman, 1996); this scale measures vicarious trauma, disruptions in cognitive schemas, or beliefs about self and others, in five psychological need areas (safety, trust, esteem, intimacy, and control) affected by trauma. In a major vicarious trauma study, Pearlman and MacIan (1995) administered a self-report questionnaire to a non-random sample of 788 self-identified trauma therapists obtained through recruitment at professional conferences and local graduate programs. The researchers found that less time on the job and participation in personal therapy to address trauma work contributed significantly to lower scores on the TSI Belief Scale. Sixty-percent of the respondents with a personal trauma history were showed greater disruptions in cognitive schemas than the group without a trauma history (Pearlman and Mac Ian, 1995). In another major vicarious trauma study, Schauben and Frazier (1995) examined a sample of female psychologists and rape crisis counselors. They found that the percentage of survivors on the therapist is caseloads significantly correlated with self-reported accounts of vicarious trauma and higher scores on the TSI.

### ***Appearance of Secondary Traumatic Stress/Compassion Fatigue***

In 1995, Figley (1995) introduced the terms *secondary traumatic stress* and *compassion fatigue*. Although the term *compassion fatigue* had already appeared in literature to describe the experience of nurses exposed to trauma in their work (Joinson, 1992), the term *secondary traumatic stress/compassion fatigue* gained recognition with the publication of “*Compassion Fatigue: Coping with Secondary Traumatic Stress Disorder in Those Who Treat the Traumatized*” by Figley (1995); since then, the term has appeared frequently in the literature. Figley (1995) defined secondary traumatic stress/compassion fatigue as the behaviors and emotions that naturally result from knowing about the trauma experienced by another and caring for or wanting to help the suffering individual. Figley (1995) believed that individuals exposed to secondary

traumatic stress/compassion fatigue, like those with PTSD, suffer from intrusive thinking, periods of avoidance and/or numbing, and persistent arousal. The symptoms of secondary traumatic stress are nearly identical to the symptoms of PTSD, except that secondary traumatic stress applies to negative emotional reactions affected by the trauma of another, such as a client (Figley, 1995). Therapists with secondary traumatic stress/compassion fatigue may avoid hearing traumatic materials, may experience traumatic imagery related to the traumatic materials, and may suffer from physical symptoms in the form of sleep disturbances, headaches, gastrointestinal problems, or heart palpitations (Clark & Gioro, 1998; Figley, 1995). All of these symptoms, identical to those of PTSD, result from indirect exposure to a traumatized client (Figley, 1995). Therefore, the main difference between secondary traumatic stress and PTSD is that secondary traumatic stress/compassion fatigue involves exposure to the traumatic stories or materials of others, such as client, whereas PTSD involves exposure to the actual trauma (Figley, 1995). Additionally, secondary traumatic stress/compassion fatigue is thought to be less severe than PTSD and to involve a much faster rate of recovery than PTSD (Figley, 1995). Figley (1995) developed the Compassion Fatigue Self-Test for Psychotherapists (CFST), an instrument to measure secondary traumatic stress/compassion fatigue. This self-report test has two sub-scales that work to explain the dimensions of compassion fatigue and burnout (Figely, 1995).

In addition to Figely (1995), Schauben and Frazier (1995) found that therapists who had a high percentage of sexual violence survivors in their caseloads reported more PTSD-like symptoms than therapists who saw fewer survivors (Schauben & Frazier, 1995). Moreover, Chrestman (1995) and Kassam-Adams (1995), who surveyed trauma therapists to test secondary traumatic stress, discovered that the level of exposure to trauma survivors' stories was associated with increased symptoms of intrusion and avoidance.

The studies on secondary traumatic stress/compassion fatigue in the 1990s often measured the symptoms by using the Impact of Events Scale (IES; Horowitz, Wilner, & Alvarez, 1979; IES-R; Weiss & Marmar, 1997). This scale of subjective distress, based on commonly reported experiences of PTSD symptoms, was used in clinical studies or the Compassion Fatigue Self-Test (CFST) (Figely, 1995).

### *Differences between Secondary Traumatic Stress and Compassion Fatigue*

Figley (1995), who used the terms secondary traumatic stress and compassion fatigue interchangeably, suggested that the two concepts refer to the same phenomenon. Because secondary traumatic stress syndrome (STSD) primarily refers to the symptoms activated by the onset of compassion fatigue, Figley preferred compassion fatigue as a reference term because it has a more accessible framing and connotation (Baranowsky, 2002; Figley, 1995, 2002). Although Figley (1995) stated that compassion fatigue more aptly describes the stress and fatigue that a compassionate professional may feel from functioning in his/her line of work, the literature commonly references both terms.

In contrast, Stamm (1997) argued that secondary traumatic stress and compassion fatigue are different constructs. From Stamm's perspective, compassion fatigue is a more general term describing the overall emotional and psychological fatigue that helping professionals experience due to their chronic use of empathy when treating suffering clients (Figley, 1995, 1999). For helping professionals who treat victims of trauma, secondary traumatic stress may contribute to the overall feeling of compassion fatigue; however, the professionals who treat populations other than trauma victims (such as the mentally ill) may also have compassion fatigue without experiencing secondary traumatic stress (Newell, 2008). Compassion fatigue, a term with broader definitions than secondary traumatic stress, includes the symptoms of both secondary



traumatic stress and burnout (Newell, 2008; Stamm 1997).

**2.1.12. Differentiation between Secondary Traumatic Stress and Other Similar Concepts:**

**1995-2000s**

Since the term secondary traumatic stress emerged in 1995, researchers have explored other concepts that shed insight on the effect trauma survivors have on trauma therapists: burnout, countertransference, and vicarious trauma. As with the terms secondary traumatic stress and compassion fatigue, a disparity exists between secondary traumatic stress and other similar negative effects in trauma therapists resulting from working with trauma survivors.

***Differences between Secondary Traumatic Stress and Burnout***

The key difference between secondary traumatic stress and burnout lies in the cause. Burnout not only includes those persons working with the traumatized, but it also results from any interaction with difficult clients (Canfield, 2005; Iliffe & Steed, 2000; Schauben & Frazier, 1995). Burnout can arise from large caseloads, the isolation of the work, lack of control, insufficient rewards, unfairness, and other bureaucratic factors (Maslach & Leiter, 1997). While secondary traumatic stress is an acute response, burnout may be the “final common pathway of continual exposure to traumatic material” (p.134) (McCann and Pearlman, 1989) and a gradual process that may increase in intensity over time (Figley, 1995). Moreover, secondary traumatic stress, which is more specific than burnout (Kebler & Figley, 1995), is not related to workplace conditions (Figley, 1995), unlike burnout keeps Figley (1995), a “collection of symptoms associated with emotional exhaustion” in relation to the workplace (p.11). Another major difference between the two concepts is that secondary traumatic stress is based on the diagnostic conceptualization of PTSD (Pearlman & Saakvitne, 1995), but burnout does not usually lead to such PTSD symptoms as intrusive imagery. In fact, some empirical evidence supports the

differentiation of the constructs of secondary traumatic stress and burnout. For example, in a study of counselors of survivors of sexual violence, Schauben and Frazier (1995) found that while counselors who had a higher percentage of sexual violence survivors in their caseloads reported more symptoms of secondary traumatic stress, working with survivors was not related to counselor burnout.

### ***Differences between Secondary Traumatic Stress and Countertransference***

Trauma researchers have focused on explaining the difference between secondary traumatic stress and countertransference (Pearlman and Saakvitne, 1995). First, secondary traumatic stress is a “long-term negative reaction to a client’s traumatic materials, whereas countertransference is a “short-term” response (McCann & Pearlman, 1990). Traumatic stress, which takes place over time and is cumulative from numerous therapeutic relationships, will emerge through countertransference (Pearlman & Saakvitne, 1995). Secondly, unlike countertransference, a reaction that should only occur within the context of psychotherapy (Figley, 1995; Sexton, 1999), secondary traumatic stress may occur in any person involved in a relationship with a traumatized person (therapist, family member, friend, and co-worker) and is not limited to therapeutic interactions, which is the case with psychoanalysis (Newell, 2008). Third, secondary traumatic stress occurs when working with victims of primary trauma; however, countertransference may occur in the process of insight-oriented treatment with an individual suffering from any type of mental illness and is not limited to trauma victims (Newell, 2008). Lastly, countertransference from working with trauma clients does not necessarily lead to conditions of secondary traumatic stress in clinicians (Pearlman and Saakvitne, 1995).

### ***Differences between Secondary Traumatic Stress and Vicarious Trauma***

Since the term of secondary traumatic stress first appeared in 1995, trauma researchers have

discussed the differences between secondary traumatic stress and vicarious trauma. The definition of secondary traumatic stress by Figley (1995) has strong similarities with the definition of vicarious trauma offered by McCann and Pearlman (1990); however, differences in the conceptualization of the two concepts exist. Figley's conceptualization of secondary traumatic stress does not specifically focus on cognitive symptoms, such as vicarious trauma, as conceptualized by Pearlman; instead, Figley placed more emphasis on psychological and behavioral symptoms (Figley, 1995) that directly link with the symptoms of PTSD (Baird & Kracen, 2006). In contrast, Pearlman's conceptualization and framework for vicarious trauma involves both a psychodynamic and cognitive perspective (McCann & Pearlman, 1990; Pearlman, 1998; Pearlman & Saakvitne, 1995). Therefore, secondary traumatic stress, which is grounded in the field of traumatology, emphasizes clinically observed DSM-IV, PTSD-based symptoms of relatively sudden onset, whereas vicarious trauma, a theory-driven construct, emphasizes more gradual, covert, and permanent changes in cognitive schema (Baird & Jenkins, 2003; Figley, 1995).

The following summarizes the differences between secondary traumatic stress and other similar concepts. First, unlike burnout, secondary traumatic stress does not stem from the workplace conditions. Burnout occurs not only from working with traumatized individuals but also from working with any difficult clients or in any stressful working conditions. Burnout does not usually lead to PTSD symptoms. Second, unlike countertransference, which only occurs within the context of psychotherapy, secondary traumatic stress appears in any relationship with traumatized individuals. While secondary traumatic stress is associated with the traumatized population, countertransference can arise in any treatment process without being limited to situations of trauma. Third, unlike vicarious trauma, which focuses on cognitive symptoms,

secondary traumatic stress symptoms focus on behavioral symptoms that directly link with PTSD symptoms. Lastly, unlike compassion fatigue, which includes the symptoms of both secondary traumatic stress and burnout, secondary traumatic stress has a narrow definition; compassion fatigue can also result from treating a diversity of populations, not just those individuals who have suffered some kind of trauma.

### **2.1.13. Revision of DSM-IV and Increase of Secondary Traumatic Stress Studies: 2000s**

In the 2000s, DSM-IV-TR (APA 2000, p. 463) established the definition of trauma, basing it on the DSM-IV criteria for PTSD (APA, 1994); this is the most widely accepted definition in the field. The DSM-IV-TR defines a traumatic stressor as:

“Exposure to an extreme traumatic stressor involving direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one’s physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associate” (APA 2000, p. 463).

This newly revised definition of traumatic stressor has created an increasing number of studies on secondary traumatic stress/compassion fatigue as compared with the past. Most academic studies have used the term *secondary traumatic stress* rather than *compassion fatigue* to describe occupational traumatic stress specific to workers assisting with traumatized populations. The secondary traumatic stress study of 2000 yielded three trends.

#### ***Areas of Literature Related to Secondary Traumatic Stress Studies in 2000s***

The first area indicates that many recent empirical studies have been conducted on the secondary traumatic stress reactions of helping professionals, including rescue or mental health

workers from disasters such as the 9/11/01 attack in New York and Hurricane Katrina in Louisiana. For instance, Creamer and Liddle (2005) examined various factors of secondary traumatic stress reactions for 81 mental health (DMH) workers who responded to the 9/11/01 victims. In addition, Naturale (2007) reported empirical case studies of social workers responding to disasters, the course of their secondary traumatic stress responses, and their struggles to overcome secondary traumatic stress.

The second area of the secondary traumatic stress literature involves that psychometric studies to create and validate the scale of secondary traumatic stress. Bride, Robinson, Yegidis, and Figley (2004) created the new secondary traumatic stress scale (STSS). Bride et al (2004) used data from 287 social workers in a southeastern state in the United States to test and validate the scale of STSS. The results reported high levels of internal consistency reliability and evidence of convergent, discriminant, and factorial validity in the STSS. Ting, Jacobson, Sanders, Bride, and Harrington (2005) conducted psychometric analyses on the STSS. Using a national sample of 275 mental health social workers, they examined the internal reliability and validity of the STSS and the factor structure through a confirmatory factor analysis. These researchers found that the internal reliability for the total STSS 17-items and Intrusion/Avoidance/Arousal subscale was high; their findings provided support for the three factor structure (Intrusion/Avoidance/Arousal) of the STSS through a confirmatory factor analysis (CFA) of the STSS.

The third area of the secondary traumatic stress study has identified the phenomenon of the secondary traumatic stress symptoms of social workers, using a larger quantitative study of a sample. Bride, Robinson, Yegidis, and Figley (2004) found that of 287 social workers in a southeastern state in the United States, more than half (53.3%) acknowledged the effects of secondary trauma stress on their personal and professional lives. Bride (2007) investigated the

prevalence of secondary traumatic stress in 282 master's-level social workers licensed in a state in the southern United States; he did this by examining the frequency of individual symptoms and the severity of secondary traumatic stress levels. Bride's results indicated that 70.2% of the social workers experienced at least one symptom in the previous week, and 55 % met the criteria for at least one of the core symptom clusters. The intrusion criterion was endorsed by nearly half of the social workers, whereas the avoidance and arousal criteria were each endorsed by one-quarter of the social workers.

The majority of the secondary traumatic stress empirical studies are based on quantitative methods, using self-assessment scale designs and samples of adult psychotherapists. Few studies have used qualitative methods, which are conducted with small samples of psychotherapists who discussed their work with clients (Canfield, 2005). However, since research into secondary traumatic stress as a field of inquiry is only about 10 years old, many of the studies are still exploratory in nature. In particular, only a few studies have examined secondary traumatic stress for professional social workers in the field of man-made disasters. Furthermore, these studies have rarely focused on only professional social workers. Although the empirical studies on secondary traumatic stress in the field of man-made disasters specific to professional social workers remain rare, this new millennium, especially the years following the terrorist attacks of 9/11/01, has witnessed more researchers paying attention to the study of secondary traumatic stress among professional social workers who treat the victims of man-made disasters. Unlike *compassion fatigue*, the term *secondary traumatic stress* is a better and more accurate way to describe the trauma stress specific to "trauma workers" assisting with "traumatized populations." Therefore, I used secondary traumatic stress since the term focuses on trauma workers.

## **2.2. Literature on Risk and Protective Factors Affecting the Development of Secondary Traumatic Stress for Helping Professionals**

Most of the research related to secondary traumatic stress has examined the factors which contribute to the development of secondary traumatic stress in helping professionals. The salient factors of secondary traumatic stress can be divided into two categories: 1) individual characteristics of practitioners and 2) environmental/work-related characteristics surrounding practitioners. This history includes the following: 1) age of practitioners (Creamer & Liddle, 2005; Ghahramanlou & Brodbeck, 2000; Good, 1996; Nelson-Gardell & Harris, 2003; VanDeusen & Way, 2006); 2) marital status of practitioners (Byrne, 2006); 3) practice experience of practitioners (Badger, Royse, & Craig, 2008; Birck, 2002; Chrestman, 1999; Creamer & Liddle, 2005; Good, 1996); 4) personal support received by practitioners (Pulido, 2005; Rogentine, 1996); and 5) training of practitioners (Chrestman, 1995; Lepore, 2004; Perrin et al, 2007). Environmental or work-related factors associated with secondary traumatic stress among practitioners include: 1) level of exposure to traumatized clients (Brady, Guy, Poelstra, & Brokaw, 1999; Creamer & Liddle, 2005; Myers & Cornille, 2002; Pinsley, 2000; Simonds, 1996; Wee & Myers, 2002); 2) different type of traumatized clients (Baird & Kracen, 2006; Creamer, 2002; Cunningham, 2003; Good, 1996; Kassam-Adams, 1995; Pinsley, 2000); and 3) degree of workplace support (Baird & Jenkins, 2003; Dickes, 1998, 2001; Hodgkinson & Shepard, 1994; Lybeck-Brown, 2002; Naturale, 2007; Pearlman & MacIan, 1995; Perron & Hiltz, 2006; Randall, Altmaier & Russell, 1989; Slattery, 2003).

### **2.2.1. Individual Factors Associated with Secondary Traumatic Stress**

#### *Age*

Several studies have recognized age as a risk factor associated with secondary traumatic

stress. Age is proffered as the reason that older people tend to have better coping skills that would render it easier for them to deal with external stress symptoms and to reduce their level of stress symptoms than younger people (Creamer & Liddle, 2005; Ghahramanlou & Brodbeck, 2000; Nelson-Gardell & Harris, 2003). Ghahramanlou and Brodbeck (2000) conducted a study that focused on sexual assault trauma counselors and found that the age of the counselors had a significant association with the intensity of secondary traumatic stress symptoms. A higher age possibly acted as a buffer against the tendency to develop secondary traumatic stress symptoms. Ghahramanlou and Brodbeck (2000) also reported anecdotal experiences of monthly staff meetings during which younger counselors were more likely to report detailed accounts of their client contacts, recollections of specific assault characteristics, and expressions of anger, frustration, disappointment, and helplessness toward their victimized clients' painful experiences. Also, based on a sample of 166 child welfare workers in two southeastern states, Nelson-Gardell and Harris (2003) found that age significantly predicted secondary traumatic stress symptoms (measured using the Compassion Fatigue Self-Test for Psychotherapists (Figely, 1995) when the regression controlled for the therapist's trauma history. One part of the sample included the entire staff of a state child welfare agency that participated in the training, while an additional part of the sample came from a self-selected set of professionals who attended identical training on different dates at a professional conference.

Therefore, empirical survey studies have found that the age of helping professionals (sexual trauma counselors and child welfare workers) working with traumatized populations (such as victims of sexual assault and child abuse and neglect) has a direct impact on professionals' level of secondary traumatic stress symptoms. The older professionals tend to have less secondary traumatic stress symptoms than the younger professionals. Age can be recognized as a protective



factor that decreases secondary traumatic stress symptoms because older social workers are more likely to have acquired more effective coping skills that help them reduce their work stress.

### ***Marital Status***

Researchers have increasingly recognized that marital status plays a protective role against psychological stress and secondary traumatic stress. For instance, Byrne (2006) studied 467 child welfare social workers in 10 area offices, five from the southeast region and five from the northeast region of the Massachusetts Department of Social Services. The study participants were recruited at monthly area office staff meetings. Byrne examined the social workers' resilience factors by levels of secondary traumatic stress/compassion satisfaction (measured by the Professional Quality of Life Scales (ProQOL; Stamm, 2002)). The evidence indicated that household status strongly and inversely affects secondary traumatic stress/compassion fatigue with burnout. According to the study results, the household status of living with others appeared to be a significant protective factor against secondary traumatic stress/compassion fatigue. Therefore, marital status can be recognized as a protective factor that decreases secondary traumatic stress symptoms because social workers who live with their partners have the opportunity to reduce their levels of secondary traumatic stress by talking with their partners about their work.

### ***Practice Experience***

Several secondary traumatic stress studies (Badger, Royse, & Craig, 2008; Chrestman, 1999; Creamer & Liddle, 2005; Good, 1996) provide evidence that those helping professionals who have less practice are more at risk to develop secondary traumatic stress symptoms than those with a great deal of practice. Good (1996) administered a survey to 257 participants (art therapists, social workers, and other mental health professionals with a master's degree and high)

by handing the survey questionnaires to the participants of the American Art Therapy Association Conference in San Diego and by mailing the surveys to eight public and private mental health agencies in California, Florida, Georgia, Kansas, New York, New Mexico, Mississippi, and Pennsylvania. He found that therapists who had more years of experience in practice showed lower secondary traumatic stress symptoms (measured using the Compassion Fatigue Self-Test for Psychotherapists by Figley [1995]). Chrestman (1999) mailed a survey methodology to therapists belonging to the International Society for Traumatic Stress Studies (ISTSS), the International Society for the Study of Multiple Personality and Dissociation (ISSMP & D), and the American Association of Marital and Family Therapists (AAMFT). Through his quantitative study of adult therapists working with traumatized populations, he discovered that increased professional experience in the therapists was associated with a decrease in trauma (secondary traumatic stress) symptoms (measured by the Impact of Event Scale [Horowitz, Wilner, & Alvarez, 1979]) and the Trauma Symptom Checklist (Elliot & Briere, 1991)).

Badger, Royse, and Craig (2008) studied hospital social workers through the use of a descriptive, cross-sectional survey design and a sampling frame of social workers employed in one of five trauma centers (offering a range of medical and psychiatric services to children and adults) located in the Midwest to explore the relationship between secondary traumatic stress (measured by the Secondary Traumatic Stress Scale (STSS) by Bride et al (2004) and years of experience in social work with hospital social workers. Their sample consisted of 121 trauma center social workers who were predominantly master's-level prepared women. The survey was distributed at a staff meeting or team meetings at each hospital. Badger, Royse, and Craig found that a greater number of years of experience in social work was associated with fewer reported symptoms of secondary traumatic stress, although the level of the association was weak.

Therefore, previous empirical survey studies have found that helping professionals (therapists and social workers) with more professional practice experience working with traumatized populations tend to have decreased levels of secondary traumatic stress symptoms. The length of practice experience as a professional social worker can be recognized as a protective factor that decreases secondary traumatic stress since those social workers with more years of professional experience might have acquired more effective coping skills that help them reduce their work stress. However, some studies have found the opposite to be true: more practice experience related to increasing level of secondary traumatic stress symptoms (Baird & Jenkins, 2003; Landry, 1999; Meyers, 1996). The discrepancies in the results of these studies suggest the need for future investigation.

### ***Personal Support***

Evidence suggests that social workers who receive more support from their family and/or friends tend to handle their stress better than the ones who receive less support (Pulido, 2005; Rogentine, 1996). For instance, using an hour-long semi-structured interview, Rogentine (1996) explored the impact of continual exposure to child abuse and neglect, including secondary trauma (whose theme is defined as the experience of symptoms of PTSD in response to viewing or hearing about another's trauma), in workers from 12 Child Protective Service (CPS) Agencies Alameda and Contra Costa counties in Northern California. She found that the CPS workers who appeared to cope better with their stress had a strong network of family and friends. Therefore, social workers who deal with traumatized clients, such as victims of child abuse and neglect, will have fewer symptoms of secondary traumatic stress if they receive support from their family and/or friends. Personal support can be recognized as a protective factor that decreases secondary traumatic stress since those social workers with more emotional support from their family

members or friends have the opportunity to reduce their levels of secondary traumatic stress by talking about their work and receiving positive feedback.

### ***Training***

Because previous evidence has linked training in the health care and social service arena with a decrease in worker stress and the retention of staff (Bennett et al., 1996; Ewalt, 1991; Frazer & Sechrist, 1994; Haviland et al., 1995), secondary trauma researchers have explored whether training might decrease the level of symptoms of secondary traumatic stress/compassion fatigue experienced by helping professionals (Chrestman, 1995; Lepore, 2004). For instance, Lepore (2004) studied the secondary traumatic stress symptoms of 206 crisis intervention workers selected from four different crisis intervention fields (personal care/nurses' aides, disaster relief workers, police officers, and professional counselors). Scores on the Compassion Fatigue subscale of the Compassion Satisfaction and Fatigue Test measured the symptoms of the secondary traumatic stress (Stamm & Figley, 1998). Although Lepore hypothesized that adequate training might reduce the level of secondary traumatic stress symptoms in crisis intervention workers, his study results did not support this theory. However, other evidence indicated that training did decrease the secondary traumatic stress symptoms. For example, Chrestman (1999) mailed a survey methodology to therapists belonging to the International Society for Traumatic Stress Studies (ISTSS), the International Society for the Study of Multiple Personality and Dissociation (ISSMP & D), and the American Association of Marital and Family Therapists (AAMFT) to conduct a quantitative study of adult therapists working with traumatized populations. His study reported that the clinicians with more Continuing Education Units (CEUs) had decreased avoidance symptoms, which are closely related to secondary traumatic stress symptoms (measured by the Impact of Event Scale [Horowitz, Wilner, & Alvarez, 1979]) and by

the Trauma Symptom Checklist (Elliot & Briere, 1991) as a result of their exposure to traumatized clients. In addition to the result by Chrestman (1999), Perrin et al (2007) found that training contributed to decreasing the symptoms of secondary traumatic stress (measured via the PTSD Checklist-Civilian Version by Weathers, Litz, Herman, Huska, & Keane, 1993) for workers assisting the victims of the September 11, 2001, attacks (in the next section, I will describe the details of this study). Training can be recognized as a protective factor that decreases secondary traumatic stress because those social workers who receive training on how to work with traumatized populations develop the skills to more effectively deal with traumatized populations. Since the examination of the effect between training and the symptoms of secondary traumatic stress has yielded two contradictory research results, further evidence is needed to validate the role training plays in the development of secondary traumatic stress.

The above studies acknowledge that age, marital status, practice experience, personal support, and training could be recognized as individual risk and protective factors that affect the occurrence of secondary traumatic stress symptoms resulting from working with traumatized populations. However, these individual factors also cause controversy since some studies have failed to examine the association between these individual factors and the level of secondary traumatic stress symptoms. Therefore, further research is needed to ascertain these individual factors and secondary traumatic stress.

### **2.2.2. Environmental/Work-Related Factors Associated with Secondary Traumatic Stress**

#### ***Exposure to Traumatized Clients***

Previous studies have demonstrated that the amount of exposure helping professionals have to the clients' traumatic material increases the likelihood of secondary traumatic stress (Brady et al., 1999; Creamer, 2002; Myers & Cornille, 2002; Pinsley, 2000; Simonds, 1996; Wee & Myers,

2002). Exposure variables can be divided into current risk and cumulative risk. Current risk includes the following exposure variables: the number of current clinical hours spent with trauma survivors; the percentage of trauma survivors in the therapist's current caseload; and/or the perceived level of exposure to graphic details with current clients. The exposure variables for cumulative risk include the number of months or years working with trauma survivors and/or the number of clinical hours spent with survivors over the course of social worker's career.

The following three studies focus only on the exposure variables of current risk. First, Chrestman (1995) mailed a survey methodology to therapists belonging to the International Society for Traumatic Stress Studies (ISTSS), the International Society for the Study of Multiple Personality and Dissociation (ISSMP & D), and the American Association of Marital and Family Therapists (AAMFT) to conduct a quantitative study of adult therapists working with traumatized populations. He found that a higher percentage of time spent with trauma clients in general clinical activities led to increasing avoidance symptoms of the secondary traumatic stress symptoms (measured by the Impact of Event Scale (IES), Horowitz, Wilner, & Alvarez, 1979 and by the Trauma Symptom Checklist (Elliot & Briere, 1991). In the same study, an increased percentage of trauma clients in the caseload predicted increasing levels of dissociation, traumatic symptoms, and intrusion. In her sample, Chrestman found that the therapists with a higher percentage of trauma clients in their caseloads reported a decrease in their children's activities away from home and less communication with family and friends. Second, Lee (1995) assessed the degree of secondary traumatic stress among 175 marriage and family therapists randomly selected from the population of national marriage and family therapists listed in the 1992 AAMFT Directory of Clinical Members and Approved Supervisors through a mail survey. She found that the more hours a therapist spent listening to a client's traumatic material, the greater

the therapist's intrusion score, one of the secondary traumatic stress symptoms (measured by the Impact of Event Scale [Horowitz, Wilner, and Alvarez, 1979]). Third, Cornille and Meyers (1999) administered a survey to assess secondary traumatic stress symptoms (measured by the Impact of Event Scale-Revised [IES-R]; Weiss & Marmar 1997, and by the Brief Symptom Inventory [BSI]; Derogatis, 1975) among a sample of 183 participants from child protective services (CPS) who had worked for more than one year with abused and neglected children in a southern state. They found that the level of work exposure with victims of child abuse and neglect was strongly associated with the presence of secondary traumatic stress symptoms in the CPS workers.

The following four studies took into account both current and cumulative exposure variables. First, Pinsley (2000), using a convenience non-probability sample, conducted a mail survey of 163 therapists working with sexual assault survivors in community mental health programs and university or hospital-based crisis programs and private practice within the five boroughs of New York City or Long Island. After studying therapists with caseloads comprised of 50% or more rape and incest survivors over the previous year, she found that the sampled therapists reported more intrusive and avoidant symptoms of secondary traumatic stress symptoms (measured by the Impact of Event Scale) associated with trauma distress than those therapists whose caseloads had fewer than 50% of such clients.

Second, Meyers and Cornille (2002) administered a mail survey to 205 Child Protective Service (CPS) workers, recruited through contact with the directors of the Family and Children's Services in 92 counties in a large southern state, who responded to abused and neglected children. The study indicated that the CPS workers who had worked with abused children for longer periods of time experienced more severe secondary traumatic stress symptoms (measured by the

Impact of Event Scale-Revised by Weiss and Marmar, 1996) than those with fewer years of experience. For example, CPS workers with five or more years experience with abused children reported more severe obsessive-compulsive and anxiety symptoms, including panic attacks and feelings of terror. Also, CPS workers who worked 40 hours per week or more reported experiencing more anger, irritability, jumpiness, exaggerated startle response, trouble with concentration, hyper-vigilance, nightmares, and intrusive thoughts and images than those who worked less than 40 hours per week. Furthermore, CPS workers putting in longer hours reported feeling more distressed, depressed, anxious, hostile, suspicious, paranoid, and delusional than their counterparts with a reduced schedule.

Third, Wee and Myers (2002) conducted a mail survey to 74 crisis counselors, employed by the Oklahoma Department of Mental Health and Substance Abuse Services or contract agencies who provided disaster mental health services following the bombing of the Alfred P. Murrah Federal Building in Oklahoma City. They found that respondents who had worked more months with bombing survivors had higher mean distress scores than those working fewer months. The amount of time working with bombing survivors was significantly associated with compassion fatigue, which is related to secondary traumatic stress symptoms, as measured by the Compassion Fatigue Self-Test for Helpers (Figley, 1995).

Therefore, previous empirical studies have found that more exposure to traumatized populations (victims of child abuse and neglect, and sexual assault, and victims of disaster) contributes to a higher level of secondary traumatic stress symptoms for helping professionals (general therapists, marriage and family therapists, child protection workers, and disaster mental health workers). The more recent studies, which have examined both current and cumulative exposure variables, have found a significant correlation between exposure variables and



secondary traumatic stress.

***Different Type of Traumatized Clients***

The following evidence shows that the level of secondary traumatic stress for helping professionals differs, depending on the type of trauma caseload they experience. First, some researchers have found that workers who treat victims of human-induced violence and crime, such as sexual assault or domestic violence, experience more severe secondary trauma than those workers who treat victims of naturally occurring trauma, such as cancer or natural disasters (Cunningham, 2003; Kassam-Adams, 1995). Cunningham (2003) gave two reasons for this: 1) Although working with both populations causes stress, those clinicians who worked with clients who were sexually abused were exposed to the clients' account of trauma induced at the hands of another human. Human-induced trauma such as sexual abuse "massively and mercilessly" exposes caregivers to the "potential boundlessness of human evil and ugliness" (Danieli, 1994, p.31) that creates anger, helplessness, and other negative feelings within helping professionals; and 2) Clinicians working with sexual abuse survivors and the clinicians working with victims of naturally caused trauma like cancer might exhibit different symptoms due to the different nature of the exposure. Clinicians who work with victims of sexual abuse might be more likely to have a long-term relationship with the same client by providing individual psychotherapy over several months; this would give those helping professionals to more traumatic stories or materials. However, Kassam-Adams (1995) raised questions about this study and its results. She conducted her own study by administering surveys to 100 psychotherapists (all master's or doctoral level therapists) in out-patient counseling agencies and sexual assault centers in central Virginia and central Maryland. The results of her self-report mail survey yielded no evidence that exposure to a difficult case type, such as sexual abuse, was associated with the intrusion and avoidance

symptoms of secondary traumatic stress measured by the Impact of Event Scale (Horowitz, Wilner, & Alvarez, 1979).

Second, some researchers have discovered that helping professionals who treat children have higher levels of secondary traumatic stress than those who treat adults. For example, one study, recruiting primarily via the Disaster Mental Health List (Creamer, 2002), used a quantitative mail study of 80 mental health professionals affiliated with various disaster relief organizations (e.g., American Red Cross, Green Cross, Salvation Army) who served as disaster mental health (DMH) workers in response to the attacks of 9/11/01. This study found a higher degrees of secondary traumatic stress (measured by the Impact of Event Scale [Horowitz, Wilner, & Alvarez, 1979]) in workers who spent more time with child clients, who discussed more morbid or graphic material, and who dealt with sensory-related material. Facing victimization in children would make clinicians feel more vulnerable and helpless since children have less power and control over abuse than adults.

Third, other types of difficult cases, such as clients with psychosis, have been recognized as contributors to increasing the secondary traumatic stress symptoms of helping professionals. Good (1996) administered a survey to 257 participants (art therapists, social workers, and other mental health professionals) by handing the survey questionnaires to the participants of the American Art Therapy Association Conference in San Diego and by mailing the surveys to eight public and private mental health agencies in California, Florida, Georgia, Kansas, New York, New Mexico, Mississippi, and Pennsylvania. She examined the participants' level of secondary traumatic stress symptoms (measured using the Compassion Fatigue Self-Test for Psychotherapists by Figley [1995]) and other salient factors. Good found that therapists who work with dissociative clients had significantly higher incidences of secondary traumatic stress.

Therefore, previous empirical studies have shown that a certain type of caseload (including clients who are victims of sexual assault, victimized children, and psychotic clients) increases the professionals' level of secondary traumatic stress symptoms. Because some controversy remains about the results, these studies require further research.

### ***Workplace Support***

Previous literature has identified workplace social support, the level of received supervision, or co-worker coherence in the workplace (Baird & Jenkins, 2003; Dickes, 1998; Pearlman & MacIan, 1995; Randall, Altmaier, & Russell, 1989) as a protective factor in the field of working with traumatized clients. Dersheimer (1990) emphasized employer support as a critical factor for helping professionals who work with traumatized populations. Also, Valent (1995) suggested that the experiences of secondary traumatic stress needed to be processed in treatment teams, in consultations with colleagues, and in debriefing meetings in order to effectively integrate them. The following major studies assessed the relationship between secondary traumatic stress and workplace support.

Hodgkinson and Shepard (1994) studied 73 social workers who provided psychological support to primary victims of two major British disasters: the Piper Alpha North Sea oil production platform explosion (July 1988) and the Clapham Rail crash (December 1988). Through the use of mail surveys, they found that the support of supervisors was a predictive factor for preventing secondary traumatic stress (measured by the Hopkins Symptom Checklist [Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974]) among disaster social workers. Dickes (2001), who was also interested in examining the relationship between workplace support and secondary traumatic stress symptoms (measured by the Impact of Event Scale [Horowitz, Wilner, & Alvarez, 1979]), conducted mail surveys with 219 psychologists from the American

Psychological Association's Clinical Psychology and Clinical Child Psychology directory with random sampling. He found a similar association between the level of workplace support and the degree of secondary traumatic stress in those therapists who treated sexually abused clients. In the beginning of the 2000s, Lybeck-Brown (2002), conducting a qualitative study with 10 therapists, found that supervision played a key role in explaining the impact of working with traumatized clients on professionals. After surveying the psychological symptoms of 79 domestic violence advocates (predominantly employed in community health centers, courts and other legal settings, crisis and counseling centers, domestic violence service agencies, hospitals, shelters, and social service organizations referred by program administrators from domestic violence-related organizations) in Massachusetts through a mail survey, distribution of surveys at meetings, and via a website, Slattery (2003) found that a higher level of co-worker cohesion and quality of clinical supervision in the work environment led to fewer reported PTSD (post-secondary traumatic stress) symptoms (measured using the PTSD Checklist [PCL-S; Weathers, Litz, Herman, Huska, & Keane, 1993]).

With the use of internet-based research, Perron and Hiltz (2006) studied secondary traumatic stress (measured using Secondary Traumatic Stress Scale by Bride et al., 2004) among 66 female forensic interviewers of abused children at child abuse evaluation centers across the United States (through contacting 301 child abuse evaluation centers listed on the National Children's Alliance [NCA] website). They collected the data using a cross-sectional survey design via an online survey. Perron and Hiltz found that organizational satisfaction had a small but statistically significant relationship with secondary traumatic stress. Organizational factors may serve to increase or buffer the impact of this stress over time. Also, through case studies of disaster, with an emphasis on those social workers who suffered from secondary traumatic stress responses in

the midst of their fieldwork, Naturale (2007) found that in the workplace, supervision and organizational supports decreased the stress that had triggered one of the worker's (among the case studies) secondary traumatic stress symptoms. These interventions helped mitigate potential secondary traumatic stress from occurring in those staff members who interacted with the social worker experiencing the strain of disaster circumstances.

Therefore, some previous empirical studies have found that receiving workplace support in terms of supervision and co-worker coherence greatly contributes to reducing the level of secondary traumatic stress symptoms for helping professionals (disaster social workers, psychologists, therapists, domestic violence advocates, and child welfare workers) who work with such traumatized populations as victims of disaster, sexual abuse, domestic violence, and child abuse and neglect. Workplace support, including supervision and co-worker cohesion, can be recognized as a protective factor that decreases secondary traumatic stress. Those social workers who receive supervision from their supervisors or work in environments in which peers get along have more opportunities to talk and share with their supervisors and peers about their trauma work. The advice and support they receive contributes to reducing their levels of secondary traumatic stress.

The above empirical studies have described how environmental/work related factors, exposure to traumatized clients, type of trauma caseload, and degree of workplace support can affect the levels of secondary traumatic stress within those helping professionals who work with traumatized populations. The majority of the studies listed above empirically prove that exposure to traumatized clients and contact with a certain type of client are risk factors for experiencing secondary traumatic stress symptoms; adequate support from supervisors and coworkers in the workplace emerges as a protective factor against experiencing secondary traumatic stress

symptoms.

Studies that investigate the risk and protective factors of secondary traumatic stress have been carried out since the end of the 1990s, when Figley (1995) created the term of secondary traumatic stress. Most studies on secondary traumatic stress and its salient factors have been based on a large quantitative survey since this survey method with its scale measurement is more convenient for assessing the level of secondary traumatic stress for helping professionals. However, most of the previous studies have several limitations in terms of measurement, samples, and procedures to identify the salient factors.

First, each previous study measured secondary traumatic stress by using a different scale: the Hopkins Symptom Checklist (HSCL; Derogatis et al., 1974), the Brief Symptom Inventory (BSI; Derogatis, 1975), the Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979, IES-R; Weiss and Marmar, 1996), Trauma Symptom Checklist-40 (TSC-40 by Briere & Runtz (1989), the PTSD Symptom Scale (PTSDSS; Foa, Rothbaum, Riggs, & Murdoch, 1991), the PTSD Checklist (PCL-S; Weathers, Litz, Herman, Huska, & Keane, 1993), the Compassion Fatigue Self-Test for Psychotherapists/Helpers (Figley, 1995), the Compassion Fatigue Subscale of the ProQOL-CSF-R-III; Stamm, 2003), and the Secondary Traumatic Stress Scale (STSS; Bride et al, 2004). As a result, the lack of a standardized secondary traumatic stress scale makes it impossible for researchers to compare the results from different studies.

Second, few secondary traumatic stress studies have only focused on professional social workers who were trained in a school of social work. Instead, most of the previous secondary traumatic studies have explored a wide-range of professionals: nurses and psychiatrists who are trained in the medical field, mental health workers/therapists who are trained in the field of psychology, law enforcement professionals, and professional social workers. Therefore, it is

necessary to study secondary traumatic stress specific to social workers in general and to professional social workers with social work degrees in particular. This emphasis would enable researchers to examine the levels of stress specific to professional social workers and to identify the unique characteristics that occur within the social work context.

Third, very few studies use random sampling; most of the secondary traumatic studies are based on a convenient sample. Therefore, it is important to study the relationship between secondary traumatic stress and its salient factors using random sampling.

### **2.3. Literature on Secondary Traumatic Stress for Workers Assisting Victims of 9/11/01**

After the tragedy of 9/11/01, secondary traumatic stress received a great deal of attention from researchers interested in how the attacks affected the workers assisting the victims (Adams, Boscarino, & Figley 2006; Boscarino et al., 2004; Colarossi, Heyman, & Phillips, 2005; Creamer & Liddle, 2005; Naturale, 2007; Pulido, 2007). Working with clients who had 9/11/01 related issues was complex due to the unique nature of this terrorist attack. For example, the workers assisting victims of the 9/11/01 attack in New York City had been exposed to the same disaster as their clients (Pulido, 2007). Therefore, hearing their clients' stories might heighten their secondary traumatic stress symptoms. The following section describes previous studies which examined the symptoms of secondary traumatic stress for these 9/11/01 workers.

In his study, White (2001) focused on the certified traumatologists from the Green Cross Projects who helped the trauma victims of the 9/11/01 World Trade Center disaster. Specifically, he studied the symptoms of secondary traumatic stress (compassion fatigue) for eight mental health professionals who joined in the project. The symptoms were measured by the Compassion

Fatigue and Satisfaction Self-Test for Helpers (Figley, 1995; Stamm, 1997). White discovered that three participants showed signs of secondary traumatic stress (compassion fatigue), two were at high risk, and one was in the extremely high risk range.

Between May and August of 2003, approximately 24 months post-September 11, Boscarino, Figley, and Adams (2004) assessed the prevalence of secondary traumatic stress/compassion fatigue (measured by Compassion Fatigue Scale Revised, Gentry et al, 2002) among 236 social workers who cared for victims of the 9/11/01 attack in New York City. All the participants had a Master's Degree in Social Work or higher and were current members of the National Association of Social Workers (NASW). The study, which was conducted via a mail survey with the social workers through random sampling, controlled for demographic factors, years of counseling, and personal trauma history. The results showed that the more involvement the social workers had with assisting the victims of 9/11/01, the higher level of secondary traumatic stress/compassion fatigue they experienced. Those social workers with a supportive work environment had a lower level of secondary traumatic stress/ compassion fatigue.

Beaton, Murphy, Johnson, and Nemuth (2004) assessed symptoms of secondary traumatic stress for 261 professional firefighters employed in an urban fire department in the Pacific Northwest through a survey either prior to or in the days and weeks following the events of 9/11/01. The Impact of Events Scale (Horowitz, Wilner, & Alvarez, 1979) measured secondary traumatic stress. The study found that those firefighters who completed the surveys at one-week post-9/11/01 experienced acute secondary traumatic stress symptoms to the events of 9/11/01.

Creamer and Liddle (2005) examined secondary traumatic stress symptoms (measured using the Impact of Event Scale by Horowitz, Wilner, & Alvarez, 1979) for 80 disaster mental health workers in 28 states, the District of Columbia, and Alberta, Canada, who responded to the



terrorist attacks of 9/11/01. The researchers used a mail survey (recruited via disaster mental health and mental health-related lists or the American Psychological Association [APA] Disaster Response Network Coordinators). The study found a relationship between higher levels of secondary traumatic stress and a higher percentage of trauma caseload, fewer years of professional experience (since licensure), younger age, and personal treatment (social workers' discussion of their own trauma or trauma work). Those disaster mental health workers who had higher levels of exposure with children, firefighters, or clients who spoke about morbid material from the context of 9/11/01 and who had accumulated a greater number of trauma client cases throughout their careers reported higher levels of secondary traumatic stress symptoms.

Simon, Pryce, Roff, & Klemmack (2006) examined the associations between alcohol use and symptoms of secondary traumatic stress (although Simon et al [2006] referred to it as PTSD symptoms, I will refer to it as secondary traumatic stress since it was measured via the Impact of Events Scale-Revised [IES-R]) within 779 Red Cross workers, including paid and volunteer staff, who responded during the first three months after the 9/11/01 event. They conducted a mail survey through random sampling from a mailing list provided by The American Red Cross (The Red Cross is a non-governmental organization with a Congressional mandate and history of responding to disasters in the United States by Jacobs, 1995). All of the staff joined in the disaster relief operations in response to the 9/11/01 attack. The study results indicated that Red Cross workers who reported increasing or decreasing alcohol use had a higher level of secondary traumatic stress symptoms than those who maintained their normal rate of alcohol consumption, though effects were stronger for increased alcohol use. Age also played a role: younger Red Cross workers experienced higher secondary traumatic stress symptoms and greater alcohol consumption.

Pulido (2005) studied 26 mental health workers who were indirectly exposed to the 9/11/01 victims to investigate the association among indirect exposure, personal trauma history, and coping strategies and the development of symptoms of secondary traumatic stress. Pulido conducted this study using a mixed methodological approach, with a qualitative interview as the primary information gathering method. The study participants were recruited via mailing a letter to an extensive list of executive directors, clinical program directors, and mental health counselors at organizations in New York City that participated in 9/11 relief efforts. According to the study results, almost half of the participants scored “moderate” to “extreme” on the symptoms of secondary traumatic stress (measured by the Impact of Events Scale-Revised (IES-R)) 30 months after the 9/11/01 event. The evidence also showed that levels of secondary traumatic stress were high among those mental health workers who responded to clients with 9/11/01 issues. Furthermore, the study found that those who used the support of family, friends, and colleagues as their coping strategies protected themselves from experiencing high levels of secondary traumatic stress.

Elhai et al (2006) examined secondary traumatic stress symptoms (although Elhai et al, 2006, called it PTSD symptoms, I refer to it as secondary traumatic stress symptoms since it was measured by the IES-R [Weiss and Marmar, 1996]) and the extent of mental health services used by 3,055 national disaster relief workers from the American Red Cross who responded to the attacks both before (lifetime) and one year after the 9/11/01 event. The Red Cross disaster workers included volunteers and paid staff members assigned to any disaster relief operation in response to the 9/11/01 event during the first three months of operations. They were studied one year after 9/11/01 by using a cross-sectional, self-report, and retrospective survey. The results indicated that workers with pre-9/11/01 mental health treatment histories were less likely to use

mental health services in the year since the 9/11/01 event, whereas those without prior mental health treatment histories were more likely to use mental health services. The findings also indicated that those individuals who had higher intrusion or hyperarousal symptoms were younger, and were either divorced/widowed had a greater likelihood of using a mental health service after the attacks.

Adams, Figley, and Boscarino (2008) examined the predictive power of secondary trauma and burnout on the psychological health of 236 social workers living in New York City 20 months following the 9/11/01 attack on the World Trade Center. All of the social workers (selected through random sampling) had a Master's degree or higher in social work or higher and were current members of the National Association of Social Workers (NASW). Secondary traumatic stress was measured with burnout by the 30-item Compassion Fatigue Scale–Revised (Gentry, Baranowsky, & Dunning, 2002). The study found that exposure to the victims of 9/11/01 was related to secondary trauma within social workers, but it did not find a relationship with burnout.

The above studies focused on secondary traumatic stress for those workers, such as mental health workers, social workers, fire fighters, and disaster relief workers (both paid and volunteer), who assisted the victims of 9/11/01. The symptoms of secondary traumatic stress were measured by the Compassion Fatigue and Satisfaction Self-Test for Helpers (Figley, 1995; Stamm, 1997), the Compassion Fatigue Scale Revised (Gentry et al, 2002), and the Impact of Events Scale (Horowitz, Wilner, & Alvarez, 1979). Each of the study samples had a diverse type. The size of each sample also varied, ranging from eight workers to 3,055 workers. Furthermore, the time period when each previous study was conducted differed: one week post-9/11/01, during the first three months after 9/11/01, one year after 9/11/01, 20 months following 9/11/01, and 30 months post-9/11/01. All of the previous studies identified that the majority of the workers had secondary

traumatic stress symptoms or had a higher risk for getting secondary traumatic stress symptoms. The factors of secondary traumatic stress for 9/11/01 works mirrored those described in the previous section: individual factors including age, marital status, personal support, and years of professional experience; and environmental/work-related factors including level of exposure to traumatized clients, type of trauma caseload, and workplace support.

None of the previous literature regarding the secondary traumatic stress symptoms in the disaster workers in New York in the aftermath of the 9/11/01 event described the continuing effects of this type of trauma beyond six years, even though many helping professionals continue to work with survivors and their families. The study by Boscarino, Figley, and Adams (2004), which examined the workers' secondary traumatic stress symptoms two years post-9/11/01, did not provide enough information regarding the longer-term effects on workers. The literature (Daly, Gulliver, Zimering, Knight, Kamholz, & Morissette, 2008) did yield evidence that psychological symptomatology in mental health workers increased after 9/11/01. Therefore, more research is needed to find the workers' level of secondary traumatic stress symptoms in long-term recovery time frames.

Moreover, the previous studies have explored secondary traumatic stress symptoms for different kinds of workers, such as mental health workers, social workers, fire fighters, and disaster relief workers (both paid and volunteer). The previous studies focused on more varied disciplines of the population. This approach could be problematic since each type of worker was doing a different task to assist the victims of 9/11/01. In particular, the mental health workers (including social workers) who provided counseling/therapy might have experienced more negative psychological symptoms than others since they tended to repeatedly hear the traumatic stories of their clients; these stories also bore a similarity to the mental health workers' own

traumatic experiences concerning the 9/11/01 event. As a result, researchers need to examine the mental health workers separately from the fire fighters, police, or other workers. However, only a few studies focus solely on social workers, although evidence from the New York State Office of Mental Health indicates that social workers made up approximately 50% of the crisis counselors in New York following 9/11/01 (New York State Office of Mental Health, 2005). Even through Colarossi, Heyman, and Phillips (2005) have examined workers in the social work field, their study sample primarily consisted of social worker students (i.e. 642 of the 777 in the total sample). This makes it very difficult to generalize to the general population of professional social workers with more experience. There is a need for a study which examines secondary traumatic stress symptoms specific to those social workers who assisted the victims of the terrorist attacks.

As a result, for this study, I decided to use the data from an already collected data set investigated by Carol Tosone and Robert Moore in 2007 to examine the symptoms of secondary traumatic stress (measured utilizing a Compassion Fatigue Subscale of the Professional Quality of Life Scale (the ProQOL R-III) validated by Figley and Stamm (1996)) in a sample of Manhattan-based social workers (all members of the National Association of Social Workers (NASW)) six years post 9/11/01. Using a mail survey, Tosone and Moore examined social workers in private practice who had provided counseling to 9/11/01 clients. They got their sample of 481 from a random sampling of current NASW member social workers (excluding students and BSWs) who were classified as mental health practitioners at the time of the survey and who identified themselves as living or working in an area highly affected by the 9/11/01 event in Manhattan, New York.

A summary of the previous section (2.2) and this section (2.3) shows the significance of using the data. First, section 2.2 refers to the limitations of the previous research of secondary

traumatic stress for helping professionals. Although the Scale of Secondary Traumatic Stress yielded fewer agreements, the measure of the Compassion Fatigue Subscale of the Professional Quality of Life Scale (the ProQOL R-III) by Figley and Stamm (1996) has been increasingly used in previous literature to assess secondary traumatic stress symptoms. Therefore, analyzing the data used by this measure might prove reliable. Second, due to the paucity of studies devoted solely to professional social workers, the data garnered from a study that focuses only on the secondary traumatic stress experienced by professional social workers trained in the school of social work would be valuable. Third, because the data includes a larger sample of 481 collected through a random sampling, it will be easier to appropriately generalize the data results. Lastly, the data could be used to examine how social workers who have provided counseling to survivors of the 9/11/01 disaster over an extensive period of time continue to suffer from their stress symptoms almost nine years later. Few studies have looked at the potential long-term psychological effects of trauma work in disaster counselors. In particular, no studies have been found that evaluate secondary traumatic stress symptoms in disaster mental health staff beyond the forty-eight months post-incident period. Therefore, exploring this data set would be valuable.

### ***Previous Findings and Significance of the Study***

Naturale (2009) defined the risk factors for secondary traumatic stress and PTSD symptoms as 1) exposure to 9/11/01 victims (participation in 9/11/01 mental health counseling and longer periods of time spent on counseling), 2) 9/11/01 witness experience (direct exposure to the World Trade Center disaster), and 3) 9/11/01 loss experience (experiencing a major personal loss associated with the 9/11/01 event). Naturale (2009) also examined the association between these risk factors and the symptoms of secondary traumatic stress and PTSD. Based on her results, only participation in 9/11/01 mental health counseling was associated with increasing symptoms

of PTSD; the remaining risk factors were neither associated with PTSD symptoms nor linked to an increase in secondary traumatic stress.

Naturale (2009) defined the protective factors of secondary traumatic stress and PTSD symptoms as increased levels of education, increased years of professional work experience, degree of participation in disaster specific training, and degree of participation in supervision during work with 9/11/01. Again, she found no association between these protective factors and the symptoms of secondary traumatic stress and PTSD. Moreover, Naturale (2009) found that demographic factors such as being married and having a higher gross annual income were associated with lower scores on PTSD symptoms, but not on secondary traumatic stress symptoms.

Based on the literature review in this second chapter, I hypothesize that the level of secondary traumatic stress symptoms for social workers stems from the interaction effect between the risk factors and the protective factors. Therefore, I will follow the above results of Naturale (2009), who conducted the only analysis of the direct effects of protective factors, including social support and training, on the occurrence of secondary traumatic stress symptoms with PTSD symptoms. However, I will also conduct a more complex analysis that examines how the interaction effect between the risk factors (exposure to traumatized populations, including the victims of 9/11/01) and the protective factors (social support and training) might be associated with the level of secondary traumatic stress symptoms.

Furthermore, I will refine the primary independent variable of exposure to traumatized populations to include not only the social workers' level of exposure to 9/11/01 victims but also the level of their exposure to general trauma clients excluding 9/11/01 victims. Social workers in New York City may counsel victims of 9/11/01 as well as victims of other types of trauma from

serious life experience (sexual assault, child abuse and neglect, domestic violence, and elder abuse, etc.) that might contribute to increasing the therapists' level of secondary traumatic stress symptoms. Therefore, this predictive analysis study on the symptoms of secondary traumatic stress for the 9/11/01 related social workers incorporates the following two risk factors as independent variables: percentage of caseload with all form of traumatized clients and number of different types of traumatized clients in a caseload.

As mentioned in the previous section (2.2), the literature review yields evidence that recognizes peer support in the workplace and personal support from family and friends as important protective factors for predicting the symptoms of secondary traumatic stress within social workers. It might be valuable, then, to include these protective variables as moderators in the analysis of predicting the symptoms of secondary traumatic stress for the 9/11-related social workers.



### **3.0. Policy for Workforce Issues of Social Workers Assisting Victims of Disaster**

This section describes the policies related to workforce issues, including occupational stress (i.e., secondary traumatic stress), for social workers assisting victims of disaster. The first half of the section focuses on two policies related to occupational hazard and stress administered by the federal government and the National Association of Social Workers (NASW). The latter half of the section explains the disaster policies, including a federal law and the NASW disaster policy.

#### **3.1. Policies for Occupational Hazard and Stress**

##### **3.1.1. Federal Policy: The Occupational Safety and Health Act (OSH Act) of 1970**

In 1970, the United States enacted the Occupational Safety and Health Act (OSH Act), Sections 20 (a) and 21 (a), 29 U.S. Code 669 (a) and 670 (a), a federal policy that helps prevent the occupational hazards and stress for every American worker (U.S. General Services Administration, 2008). Two regulations in the Act emerge as the most important. First, the Act imposes two complementary duties on an employer. To comply with the occupational safety and health standards endorsed by this Act, all employers must furnish their employees with a workplace that is free from recognized hazards likely to cause death or serious physical harm to employees. This regulation is known as the “General Duty Clause” of the OSH Act. Furthermore, the legal obligation mandates that all employers must comply with specific health and safety standards after a notice-and-comment rule-making by the Occupational Safety and Health Program (OSHA) authorized under the OSH Act (Kenworthy, 2004; U.S. Department of Labor, n.d.). Second, the Act forces all employers to follow its requirements through governmental inspections and investigations of the workplace. Any employer who violates the requirements of the Act receives a citation and/or penalty. Citations are given for such conditions as 1) the

employer fails to keep his workplace free of a “hazard” and 2) the recognized hazard causes or is likely to cause death or serious physical harm (Kenworthy, 2004; U.S. Department of Labor, n.d.).

*Administrative Feasibility of the OSH Act for Helping Professionals*

The OSH Act, which promises a better quality of life for every worker in every workplace in the United States, includes such helping professionals as social workers. While the enactment of the OSH Act should provide social workers with better health and safety protection in their workplace, the data show that the OSH Act has failed to improve the working conditions of helping professionals like social workers (Akin & Grissett, 2007; Chavez, 2003; De Croon, E., Sluiter, J., Broersen, J., Blonk, R., & Frings-Dresen, 2004; Lord, 2001; Söderfeldt, Söderfeldt, & Warg, 1995). Since the OSH Act came into being as a response to the increasing number of workers killed or injured due to industrial disasters during the 1960s, the main populations who advocated for enactment of the OSH Act were rank-and-file workers, including industrial workers (such as miners) who suffered injuries due to workplace accidents or occupational diseases/illness from chemicals or other substances. Because the OSH Act applies to employers engaged in a business affecting commerce or industry, the OSH Act has primarily focused on workers in those fields (Kenworthy, 2004). Specifically, the OSH Act has made regulations affecting the construction industry, railroad industry, trucking operations and buses, mining and quarrying, and marine activities (Kenworthy, 2004).

Therefore, the priority of health and safety issues for “the industrial workers” by the OSH Act might have led to a delay in improving health and safety issues for helping professionals such as social workers. The regulations of the OSH Act do not include any descriptions specific to social workers and other helping professionals. Although the OSH Act has recently prepared “The

Guidelines for Preventing Workplace Violence for Health Care and Social Service Workers” to reduce the number of victims of workplace violence in the health care and social service fields (U.S. Department of Labor, 2004), it is more advisory in nature than a regulation; thus, it has not been effective (Arnetz & Arnetz, 2001; Chavez, 2003; Kinross, 1992; Lord, 2001). Above all, the OSH Act has not even offered any guidelines for preventing secondary trauma from occurring within helping professionals. This might be due to the Act's lack of focus on helping professionals as well as the OSH Act's ignorance concerning the relationship between secondary trauma and helping professionals.

### **3.1.2. Policy of the National Association of Social Workers (NASW): Professional Impairment**

The National Association of Social Workers (NASW) has issued Policy Statements (2006) in the section of *Professional Impairment* (NASW, 2006) that deal with work impairments. In the section, the NASW recognizes that social workers might experience distress because they work daily with inadequate resources and very difficult clients. It is likely that the existence of these stressors places social workers at a high risk for work impairment. The NASW, therefore, has responded to social workers and their risk for work impairment. According to the NASW policy statements, statewide chapters of the NASW have begun to establish programs to address the needs of their colleagues who suffer impairments due to work. This effort began in 1978 when the NASW established services for colleagues afflicted with alcoholism and/or alcohol-related problems (NASW, 2003, 2006). In 1987, the NASW created “A Colleague-Assistance Program,” a national policy statement on professional impairment (NASW, 1987); this policy was renamed “The Impaired Professional” in 1993. In 1994, the NASW put the sections on *Professional Impairment* into its *Code of Ethics* (NASW, 1994, 1996).

In its Policy Statement to prevent problems of professional impairment from occurring, the NASW suggests the following:

- a) “Social work education programs should incorporate material about student and professional impairment, and ethical responsibilities related to impairment, into their coursework.
- b) Individual and group support should be available for both social work students and practitioners as a means to discuss job site and work stressors that may lead to the physical and psychological problems often found among those employed in social work settings.
- c) Agencies that employ social workers should ensure that working conditions should be conducive to services delivery in an effort to minimize environmental stress which places social workers at risk of impairment”.

(NASW, 2006, p 298-299)

For identification and treatment of professional impairment, the NASW recommends creating colleague-assistance confidential programs that identify colleagues who are impaired, advise them on obtaining appropriate treatment, and encourage their recovery and their return back to the workplace (NASW, 2006).

Although the policy statement identifies those social workers with addiction issues as one case of professional impairment (substance abuse is recognized as the most frequent cause of impairment in the policy statements) (NASW, 2003, 2006), it might be problematic that it does not describe the issue of secondary trauma for social workers, especially because social workers have experienced a high rate of secondary traumatic stress symptoms (Refer to Chapters One and Two).

### **3.2. Disaster Policies Related to Social Workers' Issues**

#### **3.2.1. Federal Policy: The Robert T. Stafford Disaster Relief and Emergency Assistance Act (the Stafford Act)**

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (the Stafford Act) (Pub.L. 100-707), a 1988 amended version of the Disaster Relief Act of 1974 (Pub.L. 93-288), is a federal law designed to bring an orderly and systemic means of federal disaster assistance for state and local governments in carrying out their responsibilities to aid citizens. Because of this Act, a Presidential disaster declaration of an emergency triggers financial and physical assistance. Specifically, The Stafford Act gives the Federal Emergency Management Agency (FEMA), established by President Jimmy Carter in 1979, the responsibility for coordinating all federal disaster relief programs (Office of the Federal Register National Archives and Records Administration, 2008; Turner, 2007; U.S. General Services Administration, 2008). FEMA provides the following assistance/services to individuals and households: crisis counseling programs, emergency transportation, communications, emergency food distribution and mass care, housing, direct financial assistance, emergency medical care, etc. (FEMA, 2007; Myers, 1994; Office of the Federal Register National Archives and Records Administration, 2008; U.S. General Services Administration, 2008). Congress amended the Stafford Act by passing the Disaster Mitigation Act of 2000 (DMA2K) (Pub.L. 106-390); this change incorporates pre-disaster mitigation, the mitigation of multiple hazards into a single plan, and high levels of community involvement into the planning process. Although the focus of DMA2K is still on natural hazards, FEMA strongly recommends that the different jurisdictions should address such human-made hazards as terrorist attacks (FEMA, 2007; Turner, 2007).

***Crisis Counseling Assistance and Training for Disaster Workers:***

The Stafford Act includes Section 416, also referred to as the “Crisis Counseling Assistance and Training Section” (42 U.S.C.5183) (Office of the Federal Register National Archives and Records Administration, 2008). This law authorizes the President to financially assist state or local agencies as well as private mental health organizations in providing counseling and support to disaster workers and/or victims of disasters in order to relieve mental health problems caused or aggravated by such disaster or their aftermath (FEMA, 2007; Office of the Federal Register National Archives and Records Administration, 2008; U.S. General Services Administration, 2008). The same section of the Act specifies the following for the training of disaster crisis counseling staff: “The crisis counseling project staff or consultants to the project are eligible for the specific instruction that may be required to enable them to provide professional mental health crisis counseling to eligible individuals” (Office of the Federal Register National Archives and Records Administration, 2008, p 476).

***Implications of the Act:***

The Stafford Act does not include adequate regulations to protect those workers who deal with victims of disasters. Only Section 416 of *Crisis Counseling Assistance and Training for Disaster Workers* includes such rules (Office of the Federal Register National Archives and Records Administration, 2008). Although disaster workers tend to have more exposure to traumatized victims of disaster, it is disturbing that Section 416 does not describe the workforce issues of occupational stress or secondary trauma for these workers.

**3.2.2. Policy of National Association of Social Workers (NASW): Disaster**

The Policy Statements of the NASW (2003, 2006) includes *Disasters* as a topic area. The NASW supports participation in disaster recovery and advocates for programs and policies that serve individuals and communities involved in this process. In terms of disaster social workers,

the NASW supports the following in the Policy Statements:

- 1) “Giving attention to the special training needs, stress management techniques, and support needs of first respondents and other disaster workers, and
- 2) Educating social workers and social work students in the specialized knowledge and methods of trauma response”.

(NASW, 2006, p 91)

The above sections of the Policy Statements describe training approaches and the acquisition of coping skills such as stress management. Both of these areas play critical roles in preventing those social workers who deal with disasters from experiencing occupational stress or secondary traumatic stress. Based on the Policy Statements, every chapter of the NASW should make an effort to set up programs that train social workers and teach them coping skills in order to decrease the occurrence of occupational stress or secondary traumatic stress within these social workers. However, it is troubling that the Policy Statements do not describe any specific terms of secondary traumatic stress, despite the recent social phenomenon of disaster trauma workers’ secondary trauma (Refer to Chapters One and Two).

This chapter has described the policies related to the workforce issues of those social workers in the United States who assist victims of disasters. Federal policies include the OSH Act and the Stafford Act, while the NASW policies relate to professional impairment and disaster social work. The policies of both the federal government and the NASW are supposed to deal with ways to respond to the issues of occupational stress, including secondary trauma for social workers who deal with disasters. However, as previously mentioned, these policies might not be effective in preventing these social workers from having secondary trauma. In fact, the regulations of the OSH Act and the Stafford Act do not include any descriptions of secondary trauma for helping

professionals such as social workers. Also, the policy statements by the NASW (2006) exclude the specific term of secondary trauma; this is a severe omission since secondary trauma is a critically important term for all social workers, especially those who assist traumatized disaster victims. The reason for this oversight might stem from the minimum amount of research on secondary trauma for social workers. With more empirical evidence from large-scale research on secondary trauma for social workers, the federal government and the NASW might then incorporate specific terminologies on secondary trauma for social workers into their policies. Such large-scale research, therefore, is necessary for the implementation of guidelines and regulations concerning secondary trauma.



#### **4.0. Theoretical Framework**

This section presents a description of the three theories that frame this study: psychological trauma theory, stress and coping theory, and social support theory. It discusses the use of these theories to explain how those social workers who assisted the victims of 9/11/01 may have experienced an increase in their level of secondary traumatic stress.

#### **4.1. Psychological Trauma Theory**

This study turns to psychological trauma theory to better understand the relationship between the level of exposure to traumatized clients by social workers in New York City and the social workers' degree of secondary traumatic stress. Psychological trauma theory is based on the notion that people react to the routine events in their lives in an adaptive manner; they utilize existing abilities to cope with a situation and to integrate the experience (Figley, 1985). However, when an event overwhelms the workers' adaptive capacities, the workers might develop traumatic symptoms that decrease their ability to function normally. Psychological trauma theory explains the mechanisms through which external events (including direct personal experience of an event that involves threatened death, actual or threatened serious injury, or another threat to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person according to DSM-IV-TR (APA, 2000)) can overwhelm ego capacities and undermine the ability to function (Herman, 1992; Horwitz, 1998).

People can be traumatized directly by being physically harmed or threatened with harm as well as indirectly by learning about a traumatic event (APA, 1994; APA, 2000; Figley, 2002; Pearlman & Saakvitne, 1995; Sexton, 1999; Stamm, 1999). According to DSM-IV-TR (APA, 2000), the essential feature of PTSD is the development of characteristic symptoms following

either the direct traumatic experience of an event or the indirect traumatic experience (learning about an unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close association).

Psychological trauma theory proposes that people who see and/or listen to traumatic materials/narratives can exhibit the symptoms for a PTSD diagnosis similar to those outlined in DSM-IV-TR (APA, 2000); when this occurs, the traumatized individuals experience a decrease in functioning. Because helping professionals tend to interact with traumatized populations, such as victims of disaster, violence, and crime, they often see/listen to traumatic materials/narratives in the process of assisting these victims. As a result, helping professionals are more susceptible to PTSD-like symptoms. According to psychological trauma theory, this decrease in adaptive capacities and diminishing abilities makes helping professionals less able to assist the traumatized populations (Herman, 1992; Horwitz, 1998; Newman, Kaloupek, & Keane, 1996).

Psychological trauma theory further asserts that social workers, one of the helping professionals, also might suffer traumatic, PTSD-like symptoms due to seeing/listening to traumatic materials/stories in their caseload with traumatized clients (Horwitz, 1998). Exposure to the traumatic events in the lives of their clients can negatively impact social workers by decreasing the social workers' ability to function on an emotional and/or practical level. As a result, social workers might try to protect themselves by either minimizing or ignoring their intense feelings due to exposure to their clients' traumatic events. This emotional numbness can help social workers complete a task which might otherwise impede their normal job functioning. However, psychological trauma theory warns that the feelings or memories social workers push away can still invade their consciousness and disrupt their ability to function on both a professional and personal level (Horwitz, 1998).

Furthermore, the social workers' response to their clients' traumatic materials/stories might be affected by the social workers' personal vulnerabilities, perhaps due to sharing a similar parental or marital status, age, race, or gender with their clients. According to psychological trauma theory, those social workers who identify with their clients' trauma have an increased risk for suffering traumatic effects (Horwitz, 1998). Such personal vulnerabilities as past events, coping style, and/or current life situation might also be related to the social workers' level of traumatic symptoms (Horwitz, 1998).

Therefore, according to psychological trauma theory, those social workers in New York City who assisted the traumatized victims of 9/11/01 might exhibit PTSD-like symptoms, also referred to as secondary traumatic stress symptoms, through seeing/listening to the victims' traumatic materials/stories.

### **4.2. Stress and Coping Theory**

Stress and coping theory (stress appraisal model of coping), as described by Lazarus and Folkman (1984), provides a theoretical framework for analyzing the process of the social workers' strain (exposure to traumatized populations) and the social workers' level of secondary traumatic stress. This theory recognizes stress as an emotion that results from perceiving the environment as threatening or by exceeding one's coping resources (Lazarus & Folkman, 1984). The theory posits that people manage their environmental demands by evaluating their coping resources and choosing the appropriate coping strategies (Lazarus & Folkman, 1984). However, this theory argues that those people who do not possess the available coping resources and coping strategies experience an increase in stress (Lazarus, 1998; Lazarus and Folkman, 1987).

Lazarus and Folkman's (1984) stress and coping theory involves three phases of an appraisal

process that mediate the person-environment interaction: 1) primary appraisal, 2) secondary appraisal, and 3) reappraisal. The appraisal process is an evaluative process that categorizes events based on each individual's preferred coping styles, coping success, function, and adaptation (Costa et al., 1996; Lazarus, 1998; Lazarus & Folkman, 1984; Lazarus & Folkman, 1987).

*Primary appraisal:* In the phase of primary appraisal, people evaluate the meaningfulness of events based on whether and how much that event is a) relevant, b) benign-positive, or c) stressful (Lazarus & Folkman, 1984, 1987). The individuals' beliefs, commitments, ideals, and goals influence how people judge which events have meaning and the degree of that meaning to their lives (Lazarus & Folkman, 1984).

*Secondary appraisal:* In the phase of secondary appraisal, people evaluate their coping resources, the consequences of using them, and their likelihood of achieving successful outcomes via personal and environmental resources, demands, and constraints (Lazarus & Folkman, 1984; Lazarus & Folkman, 1987). In this phase, people determine who or what is responsible for causing an event, whether they have resources available to cope with the situation, and whether their outcome expectations of different coping strategies are acceptable (Lazarus & Folkman, 1984).

*Reappraisal:* In the phase of reappraisal, people use additional and significant information following the prior cognitive evaluations to assess the meaningfulness of events and their coping strategies they applied to those events (Lazarus & Folkman, 1984). This phase in the process repeats the primary and secondary appraisal phases based on the passage of time and new information (Lazarus & Folkman, 1984; Lazarus & Folkman, 1987).

When the three phases of stress and coping theory are applied to the process of strain and

stress for social workers assisting traumatized populations in New York City, the following occurs: 1) In the first phase of primary appraisal, the social workers who listen to their clients' traumatic stories evaluate that exposure as stressful; 2) In the second phase of secondary appraisal, the social workers determine whether they have the available resources to cope with the stressful situation; they might share their work stress with their peers; and 3) In the third phase of reappraisal, the social workers who select talking about their work stress with their peers might subsequently share their work stress with their supervisors if their peer support is insufficient.

Based on stress and coping theory, coping resources and strategies in the second and third phases are critical components in determining an individual's stress response; they can be recognized as moderating variables which buffer an individual's stress in the research context. Researchers (Foa, Hembree, & Rothbaum, 2007; Horowitz, 1986; Victorson et al., 2005) have theorized that traumatized populations who cannot find their appropriate coping resources or strategies might attempt to cope with their traumatic memories through persistent oscillations between hypervigilance and avoidance of PTSD symptoms. Thus, the utilization of certain coping strategies predicts their level of PTSD symptoms. In fact, evidence has indicated that those helping professionals who seek social support may experience fewer PTSD symptoms arising from traumatic secondary exposure (Ptacek, Patterson, Montgomery, & Heimback, 1995).

Therefore, according to stress and coping theory, those New York social workers who experienced stress from their exposure to traumatized populations, including 9/11/01 victims, can buffer their level of secondary traumatic stress symptoms by utilizing coping resources or strategies. Such strategies and resources might include receiving supervision, seeking peer support and/or support from family and friends, and increasing their clinical skills (i.e., receiving

training). However, those social workers who cannot find appropriate coping resources or strategies to deal with their stressful work conditions might experience an increase in their level of secondary traumatic stress symptoms.

### **4.3. Social Support Theory**

Social support theory provides a sound framework for examining the social workers' stressors (exposure to traumatized populations) and the social workers' level of secondary traumatic stress. Social support refers to the comfort, assistance, and/or information people receive through formal or informal contacts with other individuals and groups; it includes the qualitative dimension of the individual's social network and the degree of available and reciprocal interpersonal environmental resources (Flannery, 1990; Wallston, Alagna, Devellis, & Devellis, 1983). Based on the previous literature, social support theory proposes that social support contributes to better health, speedier recovery from illness and loss, higher morale within the workforce, greater self-esteem for the individual, and a stronger, more resilient nature in times of stress and crisis. Individuals with a strong social support system should be better able to cope with stress than those with little or no social support. According to this theory, people with secure support systems have lower levels of physical and psychological symptoms than their counterparts who lack these support systems (Germain, 1982).

Previous literature offers two interpretations of social support theory. First, the literature suggests that social support directly contributes to reducing stress in the individual's daily life; during times of heightened distress, social support can serve as a direct protective function from physical illness and psychopathology (Cronin-Stubbs & Brophy, 1985; Brown, 1998; Hogan, Linden, & Najarian, 2002; Ross, Altmaier, & Russell, 1989; Savicki & Cooley, 1987; Schaefer,

Coyne, & Lazarus, 1981; Sullivan, 2003; Turnipseed, 1998; Van Dierendonck, Schaufeli, & Buunk, 1998; Van Y Peren, Buunk, & Schaufeli, 1992). For example, Sullivan (2003) studied 322 AIDS workers (consisting of social workers, case managers, health care providers, etc.) who provided direct services to patients with HIV/AIDS in AIDS service organizations in New York City. He examined whether the type of staff development activity (social support, training, and education) reduced such negative outcomes as staff burnout and turnover. The self-administered questionnaire was distributed through the delivery of a two-hour workshop offered at each AIDS service organization. Sullivan found that social support and training were related to burnout and turnover.

The literature also asserts that social support provides buffering effects that shield the individual from the adverse consequences of stress exposure (Dean & Lin, 1977; Etzion, 1984; Koeske & Koeske, 1989, 1990; Lepore, 1992; Lepore, Evans, & Schneider, 1991; Lin, Woelfel, & Light, 1985; Lind, 2000; Thoits, 1982; Tohru, Kondo, & Sakihara 2006). For instance, Tohru et al (2006) studied 4,558 middle-aged (ages 40-69) residents (males=2,333, females=2,225) in Rokunohe, a town in northern Japan that has witnessed a recent rise in suicides. The researchers explored the association between depression with the buffering effects of social support in mid-life crisis and gender differences. Through the placement method using a self-administered questionnaire, the study found a stress-buffering effect of social support on the depressive symptoms occurring in middle age only for male participants.

Researchers and theorists in the area of social support focus on the following five basic concepts as the elements that comprise the social support theory: 1) emotional support, 2) informational support, 3) appraisal support, 4) instrumental support, and 5) social integration or network support (Cutrona & Russell, 1990; George, Reed, Ballard, Colin, & Fielding, 1993;

Lazarus, 1991; Lind, 2000; Walton, 1997).

1) *Emotional support*: Emotional support, which is viewed as the sharing of feelings with others who can listen empathetically and the ability to turn to others for comfort and security during times of stress, leads the person to feel that he or she is cared for by others (Folkman, Schaefer, & Lazarus, 1979; Gore, 1978; Schaefer et al., 1981).

2) *Informational support*: Informational support is defined as providing the individual with education, advice, or guidance regarding possible solutions to a problem; it delivers specific facts that help the individual resolve a life stress or recognize the limitations of the resolution (Cassel, 1976; Cohen & Wills, 1985; Cutrona & Russell, 1990; Flannery, 1990; Wallston et al., 1983; Weiss, 1974).

3) *Appraisal support*: Appraisal support (esteem support), which represents the bolstering of a person's sense of competence or worth by others, focuses on the interactions taking place within social relationships and the person's evaluation of whether such interactions are helpful and meaningful (House & Kahn, 1985). For instance, this type of support includes the receipt of positive feedback of the individual's skills and abilities to cope with a stressful situation (House & Kahn, 1985).

4) *Instrumental support*: Instrumental support (tangible aid) refers to the concrete assistance that gives an individual in a stressful situation the necessary resources, including information, money, and services, to cope with the stressful event. Instrumental support may be transferred through the provision of training and education services as well as opportunities to share in organizational activities (Cohen & Wills, 1985; Dean & Lin, 1977; Flannery, 1990; Wallston et al., 1983).



5) *Social integration or network support*: Social integration or network support is recognized as the individual feeling a part of a group whose members share the same interests and concerns. The type of the relationship created through network support includes more casual friendships in which an individual can engage in social and recreational activities (Cutrona & Russell, 1990; Lind, 2000).

In this study on the level of secondary traumatic stress for social workers in New York City, four of the previously mentioned concepts of social support theory might play a critical role: 1) emotional support, 2) informational support, 3) appraisal support, and 4) instrumental support. First, those social workers assisting the victims of 9/11/01 might need emotional support, including empathetic understanding from supervisors, peers, family, and friends, to reduce their level of stress from working with their traumatized clients. In fact, previous literature suggests that by sharing their experience with co-workers, family, and friends through a discussion of their reactions to the work, helping professionals might mitigate the effects of the emotional drain and stress from their work, sustain their interest in their work, and continue to provide quality care (Barbour, 1994; Gabriele, 1996; Heaton, Haviland, Weinberg, Messeri, & Aidala, 1995; Horsman & Sheeran, 1995). Second, those social workers assisting the victims of 9/11/01 might need informational support. The acquisition of knowledge and clinical skills on how to assist victims of disaster and the participation in disaster-specific training could lead to a reduction of work stress within those helping professionals who work with traumatized populations. Previous literature indicates that knowledge helps mediate stress reactions for helping professionals, empowers them, and enhances their role as a resource for the organization (Heaton et al., 1995). Third, those social workers assisting the victims of 9/11/01 might need appraisal support. By receiving a direct review by supervisors and feedback from co-workers on

job performance, helping professionals can enhance their self-efficacy and decrease their secondary traumatic stress symptoms. Fourth, those social workers assisting the victims of 9/11/01 might need instrumental support, which includes supervisory and co-worker guidance in problem-solving or instruction from a colleague on how to work with traumatized clients. Therefore, emotional support, informational support, appraisal support, and instrumental support emerge as key elements that create a productive and healthy workplace for those social workers assisting the victims of 9/11/01.

#### **4.4. Summary and Integration of Theoretical Approaches**

This chapter has described psychological trauma theory, stress and coping theory, and social support theory in order to explain the process of strain (exposure to traumatized populations) and secondary traumatic stress within those social workers in New York City who assist traumatized populations, including the victims of 9/11/01. In addition to each of the three theories, the following social phenomena shed insight on the social workers in New York City. First, based on psychological trauma theory, when social workers see/listen to traumatic materials/narratives in the process of assisting traumatized populations, including 9/11/01 victims, they might develop PTSD-like symptoms similar to their clients' symptoms; as chapter two explains, those symptoms are referred to as secondary traumatic stress symptoms. Second, social support theory suggests that those social workers who receive more social support from supervisors, peers, family, and/or friends, and more knowledge and skills through training (in particular, training specific to the 9/11/01 event) might experience a lower level of stress. Third, based on stress and coping theory, social workers who have more exposure to traumatized populations, including 9/11/01 victims, might experience more stress symptoms. However, social workers can reduce

their level of stress symptoms by 1) receiving supervision, peer support, and/or support from family and friends and 2) increasing their clinical skills and knowledge through training.

#### **4.5. Purpose, Research Questions, and Hypotheses**

The purpose of this study, then, is rooted in the assumption that the combination of all three theories might allow for a greater explanation and understanding of the relationship between the level of exposure to traumatized populations, including victims of 9/11/01, for the social workers in New York and the level of secondary traumatic stress symptoms that these social workers experience. Using a combination of the three theories -- psychological trauma theory, stress and coping theory, and social support theory-- this dissertation then tested the following research questions:

- 1) What are the risk factors associated with an increased level of reported secondary traumatic stress for New York City social workers assisting traumatized populations?
- 2) What are the protective factors for decreasing the level of secondary traumatic stress for New York City social workers assisting traumatized populations?
- 3) How do the protective factors contribute to buffering those risk factors that decrease the level of secondary traumatic stress for New York City social workers assisting traumatized populations?

To answer the above research questions, I tested the following three hypotheses based on the research model that comes after the description of each hypothesis (See Figure 1 on page 77 and Figure 2 on page 78). Using previous research, all of the forthcoming hypotheses were controlled for individual demographic factors including age, marital status, income, hours of providing direct practice, and years of practice experience. As mentioned in the second chapter, previous

evidence indicates that age is a predictive factor of secondary traumatic stress symptoms for helping professionals; older professionals tend to have acquired better coping skills that reduce their level of stress symptoms than the younger professionals (Creamer & Liddle, 2005; Ghahramanlou & Brodbeck, 2000; Nelson-Gardell & Harris, 2003). Marital status (being married/household status of living with others), also mentioned in the second chapter, has been recognized as a protective factor against stress symptoms such as secondary traumatic stress, burnout, or PTSD (Boscarino, Figley, & Adams, 2004; Byrne, 2006; Naturale, 2007). A higher income also emerges as a protective factor that shields helping professionals from stress or other PTSD symptoms (Dhooper & Byars, 1989; Naturale, 2007). Research indicates that helping professionals with more hours of direct contact with clients have higher rates of stress symptoms such as secondary traumatic stress or burnout (Baird & Jenkins, 2003; Pines, 1993). Finally, the second chapter presents studies that show that helping professionals with fewer years of professional practice experience are more likely to have secondary traumatic stress symptoms than those with more years of experience (Badger, Royse & Craig, 2008; Chrestman, 1999; Creamer & Liddle, 2005; Good, 1996). Also, the following hypotheses are based on empirical data from various studies as mentioned in the 2<sup>nd</sup> chapter as well as theories suggesting and grounding the prediction.

***Research Hypotheses***

**Hypothesis 1:** Hypothesis one, based on psychological trauma theory, suggests that a greater exposure to traumatized populations results in more secondary traumatic stress symptoms.

Those social workers more involved with traumatized populations, including 9/11/01 victims, will be at greater risk for secondary traumatic stress.

**Hypothesis 2:** Hypothesis two, based on stress and coping theory and social support theory,

focuses on the direct effects of social support and training and the occurrence of secondary traumatic stress symptoms for the social workers assisting 9/11/01 victims.

**Hypothesis 2-1:** Those social workers assisting victims of 9/11/01 with more support from supervisors will be at less risk for secondary traumatic stress.

**Hypothesis 2-2:** Those social workers assisting victims of 9/11/01 with more support from peers will be at less risk for secondary traumatic stress.

**Hypothesis 2-3:** Those social workers assisting victims of 9/11/01 with more support from family and friends will be at less risk for secondary traumatic stress.

**Hypothesis 2-4:** Those social workers assisting victims of 9/11/01 with more knowledge and skills through participating in disaster-specific training will be at less risk for secondary traumatic stress.

**Hypothesis 2-5:** Those social workers assisting victims of 9/11/01 with more knowledge and skills through participating in 9/11/01 specific training will be at less risk for secondary traumatic stress.

**Hypothesis 3:** Hypothesis three, based on a combination of the three theories (psychological trauma theory, stress and coping theory, and social support theory), asserts that social support and training will buffer the negative impact of exposure to traumatized populations, including 9/11/01 victims, secondary traumatic stress symptoms.

**Hypothesis 3-1:** Those social workers more involved with traumatized populations, including 9/11/01 victims, will be at greater risk for secondary traumatic stress, but those with more support from supervisors will be more protected from secondary traumatic stress than those with less supervisor support.

**Hypothesis 3-2:** Those social workers more involved with traumatized populations, including

9/11/01 victims, will be at greater risk for secondary traumatic stress, but those with more support from peers will be more protected from higher levels of secondary traumatic stress.

**Hypothesis 3-3:** Those social workers more involved with traumatized populations, including 9/11/01 victims, will be at greater risk for secondary traumatic stress, while those with more support from family and friends will be more protected from secondary traumatic stress than those workers with less support.

**Hypothesis 3-4:** Those social workers more involved with traumatized populations, including 9/11/01 victims, will be at greater risk for secondary traumatic stress, but those with more knowledge and skills through participating in disaster-specific training will be protected relative to those with less disaster-specific training.

**Hypothesis 3-5:** Those social workers more involved with traumatized populations, including 9/11/01 victims, will be at greater risk for secondary traumatic stress, but those with more knowledge and skills through participating in 9/11/01 specific training will be protected relative to those not participating in 9/11/01 specific training.

**Figure 1: Predictors of Secondary Traumatic Stress for Social Workers in New York City (Research Model 1)**

Control Variables

- Age
- Marital status
- Income
- Hours per week in the field
- Years in the field

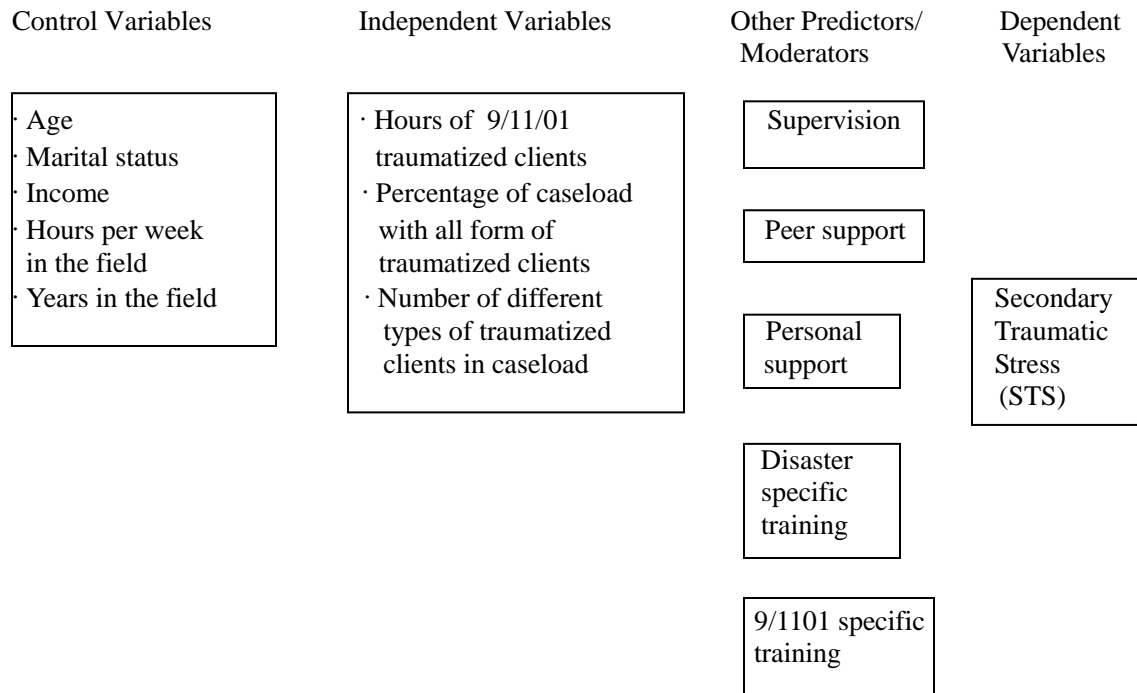
Independent Variables

- 9/11 versus non-9/11 providers
- Percentage of caseload with all form of traumatized clients
- Number of different types of traumatized clients in caseload

Dependent Variable

Secondary Traumatic Stress (STS)

**Figure 2: Predictors of Secondary Traumatic Stress for Social Workers Assisting 9/11/01 Victims (Research Model 2)**





## **5.0. Methodology**

This chapter focuses on the following: the source of the data used in the dissertation, research participants, data collection procedures, research design, variables, instrumentation, and data collection procedures.

### **5.1. Data Source: Post-9/11/01 Quality of Professional Practice Survey (PQPPS)**

I conducted a secondary data analysis from an already collected data set, the Post-9/11/01 Quality of Professional Practice Survey (PQPPS) (See Appendix A). The principal investigator of the study was Carol Tosone, and the co-investigator was Robert Moore (New York University IRB protocol number HS ID #5613, approved September 22, 2006). The time period of the study was from June through August 31, 2007. The PQPPS, a single occasion, cross-sectional, self-administered survey, consisted of demographic questions, 9/11/01 experiences, and professional practice-related information. The data set through the PQPPS explored how professional social workers dealt with the personal and professional stress of trauma in the post 9/11/01 practice environment. Before the original data were collected, the survey was piloted to 12 social work professionals with Master's and Doctoral degrees; ten lived in the tri-state area around Manhattan, while two resided in surrounding states. Minimal editing was made to the wording on several questions for clarification, but no major problems were reported as a result of the pilot. The survey completion time ranged between 30-45 minutes (Naturale, 2009).

### **5.2. Sampling Procedure**

The PQPPS study employed a stratified random sampling for its sampling procedure. InFocus has the ability to draw a random sample of up to 5,000 NASW members per request from the

organization's membership list. The sample was drawn from a sampling frame with the following characteristics: 1) social workers 18 years or older; 2) understanding of written English at a sixth to eighth grade level; 3) current member of NASW (excluding students and BSWs); 4) classification as mental health practitioners at the time of the survey; and 5) identified in the NASW database as having a Manhattan-based zip code, the area most affected by the 9/11/01 terrorists. The sampling list of 1,297 addresses (plus one dummy for InFocus quality purposes) was forwarded by InFocus to the investigator as a set of mailing labels corresponding to the members who were selected. In addition to the original 1,297 addresses provided by InFocus, three social workers who learned about the study from colleagues and who met the selection criteria but were not on the InFocus list were added, bringing the total number of addresses in the sample to 1,300 (Naturale, 2009).

### **5.3. Data Collection Procedures**

In June 2007, 1,300 postcards were mailed to inform potential study participants that they would shortly receive a survey. Within two weeks of the postcard mailing, the Post-9/11/01 Quality of Professional Practice Survey was sent to the same sampling list (minus any returned postcards) along with a personalized cover letter and a self-addressed, stamped envelope. By the end of July 2007, 1,275 surveys had been successfully delivered. Four weeks after the initial mailing, a follow-up letter was sent with a second survey and another stamped, self-addressed return envelope. Before the August 31, 2007, cut-off date, 507 postcards, a 40% return rate, had been received. Because 26 of the 507 surveys came from retired social workers, they were deemed unusable, leaving 481 useable surveys.

#### 5.4. Sample

This study included a total of 481 participants for analysis. The power of the sample size was identified through a statistical power analysis. A sample size of (N) 481 had the power of over .995 to detect a correlation of medium effect size (.30) at a .05 significance level. The two regression research models described in chapter four were used to conduct an analysis on the two samples. The first regression research model used a total sample number of 481. However, the actual total number of the sample for the regression analysis decreased to 373 due to listwise deletions and missing responses in 1) the demographic variables (the missing number: 53), 2) the trauma exposure variables (the missing number: 64), and 3) the secondary traumatic stress variables (the missing number: 26). Also, the second regression research model used a subsample of 293 social workers who reported they had provided direct services to 9/11/01 victims. However, due to listwise deletion and missing response in the demographic variables (the missing number: 29), trauma exposure variables (the missing number: 24), presumed protective variables (the missing number: 25), and secondary traumatic stress (the missing number: 14), the actual total number of the sample for the regression analysis became 225.

#### 5.5. Operationalization of Variables

Descriptions of the variables in this dissertation study were operationalized using data collected by various measures in the Post-9/11/01 Quality of Professional Practice Survey (PQPPS). This dissertation study used only a subset of variables from the overall PQPPS.

##### *Dependent Variable*

The dependent variable was secondary traumatic stress, as operationalized by a subscale (Compassion Fatigue/Secondary Traumatic Stress) from the Professional Quality of Life Scale,

Revision IV(ProQOL R-IV [Stamm, 2005]). Figley (1995) originally developed the scale, basing it upon his clinical experience. He used the subscale of Compassion Fatigue/Secondary Traumatic Stress from the ProQOL R-IV to measure the level of secondary traumatic stress. The ProQOL R-IV has 30 items, each of which has a six-step scale of 0 to 5. The ProQOL R-IV consists of three subscales: Compassion Satisfaction, Compassion Fatigue/Secondary Traumatic Stress, and Burnout. Each of these three subscales has 10 items. The original study by Tosone (2009) (the Post 9/11/01 Quality of Professional Practice Survey) did not use the burnout subscale. The Compassion Satisfaction Subscale (See Question 2 (b,d,h,k,l,m,n,p,r,t) in Appendix A) and the Compassion Fatigue/Secondary Traumatic Stress Subscale (See Question 2 [a,c,e,f,g,i,j,o,q,s] in Appendix A) were used in the original study. This dissertation only used the Compassion Fatigue/Secondary Traumatic Stress subscale to measure secondary traumatic stress and compassion fatigue (See Question 2 (a,c,e,f,g,i,j,o,q,s) in Appendix A). Stamm (2005) reported a reliability of .80 for the Compassion Fatigue/Secondary Traumatic Stress. In a study by Tosone (2009), the reliability of the Compassion Fatigue/Secondary Traumatic Stress was .76. The question items included the following: I am preoccupied with more than one person I help; I feel as though I am experiencing the trauma of someone I have helped; I avoid certain activities or situations because they remind me of the frightening experiences of the people I help; and, As a result of my helping, I have intrusive, frightening thoughts.

***Primary Independent Variable: Exposure to Traumatized Clients***

There were three indicators of exposure: the amount of exposure to 9/11/01 victims, the percentage of the caseload involving traumatized clients, and the total number of different types of traumatized clients in the caseload.

*(1) Amount of exposure to 9/11/01 victims*

For the latter subsample, the amount of exposure was measured based on the following question: “If you provided volunteer or paid mental health services at the time of the 9/11/01 event, how many total hours did you work on 9/11/01-related events?” (See Question 31 in PQPPS, Appendix A). I recoded the reported hours using the following categorization: 1-10 hours=1, 11-20 hours=2, 21-30 hours=3, 31-40 hours=4, 41-50 hours=5, 51-60 hours=6, 61-70 hours=7, 71-80=8, 81-90=9, 91-100 hours=10, 101-150 hours=11, and more than 150 hours=12. This recoding was intended to provide an approximate normal distribution for the amount of exposure to 9/11/01 victims based on hours reported by the social workers who participated in the survey. For the full sample (N=481), the social workers’ exposure to 9/11 victims was operationalized dichotomously by coding the social workers’ reporting any exposure to 9/11/01 victims as “yes” and those without exposure to 9/11/01 victims as “no”.

*(2) Percentage of caseload with all forms of traumatized clients*

The second measure of exposure (scoreable for all respondents) involved any type of traumatized clients, based on the question: “About what percentage of your time per week is with clients addressing trauma?” (See Question 24 in PQPPS, Appendix A). To achieve an approximately normally-distributed scoring of this variable, the reported percentages were recoded so that 0%=0, 1-10 %=1, 11-20%=2, 21-30%=3, 31-40%=4, 41-50%=5, and more than 50%=6.

*(3) Number of different types of traumatized clients in caseload*

The third exposure measure (scoreable for all respondents) was the number of different types of traumatized clients in the total caseload, based on the item: “Please check all trauma-related areas or client populations with whom you currently work.” The 16 populations listed included the following: Adult Survivors of Childhood Sexual Abuse, Domestic/Partner Violence, Child

Physical Assault Survivors, and Elder Abuse (See Question 23 in the PQPPS, Appendix A). The possible score range for the measure was 0 to 16.

***Other Predictors/Moderator Variables***

The following five predictors/moderator variables were measured for the section of the PQPPS answered only by those who reported working with 9/11/01 victims: 1) receiving supervisory support was based on the question, “During your work in the 9/11/01 event, did you receive supervision?”, coded 0=no, 1=yes (See Question 34 in the PQPPS, Appendix A); 2) receiving peer support from colleagues in the workplace was addressed with the question, “During your work with the 9/11/01 event, did you receive peer support from colleagues (i.e., others who understood the work you were doing and offered understanding/listening)?”, coded 0=no, 1=yes (See Question 35-a in the PQPPS, Appendix A); 3) personal support (support from family members and friends) was addressed by, “During your work with the 9/11/01 event, did you receive personal support (i.e., family members, friends)?”, coded 0=no, 1=yes (Question 35-b in the PQPPS, Appendix A); 4) the receipt of Disaster-Specific Training prior to the 9/11/01 event was measured by “Prior to the 9/11/01 event, did you have any disaster-specific training?”, coded 0=no, 1=yes (See Question 32 in the PQPPS, Appendix A); and 5) the receipt of 9/11/01 Specific Training received during the event was based on the question, “During your work with the 9/11/01 event, did you at the time receive adequate training for the job?”, coded 0=no, 1=yes (See Question 33 in the PQPPS, Appendix A).

***Control Variables***

Control variables were measured based on information provided in the demographic section of the survey. These included years of age, marital status, income, hours per week in the field (“Approximately how many hours do you spend each week in direct practice with clients?”

(Question 21 in the PQPPS, Appendix A), and years in the field (“How many years have you worked in the field post MSW?” (Question 19 in the PQPPS, Appendix A). Marital status was recoded as currently married=1 or non-married=2. Income was reported in the following categories: <\$19,000=1, \$20,000-\$39,000=2, \$40,000-\$59,000=3, \$60,000-\$79,000=4, \$80,000-\$99,000=5, and \$100,000 or more=6.

### **5.6. Data Analysis Plan**

Data analysis was conducted through a series of three steps. First, frequency distributions and percentages for key variables were obtained to describe the sample. Using the Statistical Package for the Social Sciences (SPSS/PC), descriptive statistics and frequencies were garnered in order to create a profile of the respondents.

The second step in the data analysis process involved testing whether demographics, independent variables, and other variables were significantly related to secondary traumatic stress. This step used a Pearson product-moment correlation coefficient.

In the final step, multiple regression analyses were conducted to test elements of the research model. The analysis plan included a multiple regression analysis of the full sample (N=373) designed to test the relationship between exposure to traumatized populations and secondary traumatic stress (See Figure 1 on page 77) and a test of the full model on a subsample of 9/11/01 providers (N=225) designed to test the buffering effects on secondary traumatic stress (See Figure 2 on page 78). The analysis plan of the multiple regression to test the hypotheses was divided into the following two parts: Part I and Part II.

#### ***Regression Analysis Part I***

In this part of the analysis plan, a multiple regression analysis was conducted to evaluate the

effect of the exposure to traumatized populations on secondary traumatic stress for all survey respondents (N=373), controlling for the respondents' demographic variables. This multiple regression analysis tested Hypothesis one (See page 74), but also employed all available cases. Exposure to 9/11/01 victims in this analysis was measured dichotomously as any exposure (coded 1) or no exposure (coded 0).

I conducted the regression analysis by using the following two steps:

- 1) In the first step, the set of variables entered into the regression consisted of the demographic variables (age, marital status, income, hours per week in the field, and years in the field).
- 2) In the second step, the independent variables (any or no exposure to 9/11/01 victims, percentage of caseload with all form of traumatized clients, and number of different types of traumatized clients in caseload) were entered. The criteria of the significance in the regression analysis was a p value less than .05; the criteria of the marginal significance was a p value less than .1.

### ***Regression Analysis Part II***

In the second part of the regression analysis, I tested Hypotheses one-three (See pages 74-76) on the subsample of 9/11/01 providers (N=225).

I conducted the regression analysis by using the following four steps:

- 1) In the first step, the set of variables entered into the regression consisted of the demographic variables (age, marital status, income, hours per week in the field, and years in the field).
- 2) In the second step, all of the protective variables (supervision, peer support, personal support, disaster-specific training, and 9/11/01 specific training) were entered.



3) In the third step, the independent variables (hours of contact with 9/11/01 traumatized clients, percentage of caseload with all forms of traumatized clients, and number of different types of traumatized clients in caseload) were entered.

4) In the fourth step, the three interaction products of each protective variable (supervision, peer support, personal support, disaster-specific training, and 9/11/01 specific training) and the independent variables (hours of 9/11/01 traumatized clients, percentage of caseload with all form of traumatized clients, number of different types of traumatized clients in caseload) were entered separately (the above same steps 1-3 will be repeated whenever each of the interaction products of each protective variable and independent variable is entered).

Therefore, the multiple regression analysis was conducted five times because five moderators (the interaction products of protective variables and the independent variables) were examined separately through the above steps 1-4. The criterion of the significance in the regression analysis was a p value less than .05; the criteria of the marginal significance was a p value less t.

## 6.0. Results

### 6.1. Descriptive Statistics

#### 6.1.1. Demographic Characteristics

The demographic characteristics of the social workers in New York City (N=481) are described as follows.

As displayed in Table 1, the mean age for the social workers in New York City was 60-years-old (SD=9.3). Almost half of the respondents reported being Jewish (45%; N=213). Another 19% reported no religious affiliation (N=90), while 18% (N=86) identified as Christian (a group of combined Catholic, Protestant, and other Christian denominations). Most of the social workers in New York City (94%; N=443) were living in Manhattan, while only 4% (N=19) of the social workers were living in other places such as the Bronx, Brooklyn, Queens, or Staten Island. Thirty-seven percent (N=175) of the social workers in the total sample (N=481) witnessed the 9/11/01 event in person; more than half of the social workers (63%; N=300) did not. Ten percent of the social workers (N=47) experienced some major loss due to the events of 9/11/01, while the majority of the social workers (90%; N=428) did not.

**Table 1. Demographic Characteristics**

Variable	n	%
Age	473	
20-39	14	3.0
40-49	39	8.2
50-59	154	32.6
60-69	213	45.0
70-79	43	9.1
80-89	10	2.1
Gender	477	
Female	383	80.3
Male	94	19.7

Secondary Traumatic Stress

Variable	n	%
Religion	471	
Christian	86	18.3
Jewish	213	45.2
None	90	19.1
Buddhist	14	3.0
Atheist	28	5.9
Other	40	8.5
Race	474	
Asian or Pacific Islander	3	0.6
African-American/Black	6	1.3
White	446	94.1
Hispanic or Latino	9	1.9
Mixed Race	7	1.5
Other	3	0.6
Marital Status	472	
Never Married	84	17.8
Married	271	57.4
Separated	9	1.9
Divorced	81	17.2
Widowed	27	5.7
Living Arrange	477	
In a relationship, living apart	43	9.0
Cohabiting with a partner	302	63.3
Living with others than family	6	1.3
Living with family (not partner)	27	5.7
Living alone	99	20.8
Borough of Residence	472	
Manhattan	443	93.9
Other	29	6.1
9/11/01 Witness Experience	475	
Having witness experience	175	36.8
None	300	63.2
9/11/01 Loss Experience	475	
Having loss experience	47	9.9
None	428	90.1

Note. (N=481) N is less than 481 due to missing values

**6.1.2. Professional Characteristics**

The professional characteristics of the social workers in New York City (N=481) are displayed in the following Table 2.

**Table 2. Professional Characteristics**

Variable	N	%
Education	473	
MSW	335	70.8
MS/MA	15	3.2
Ph.D./DSW	69	14.6
Other Degree	15	3.17
2 or more degrees	39	8.25
Income	464	
\$ 19,999 or less	5	1.1
\$20,000-\$39,999	13	2.8
\$40,000-\$59,999	53	11.4
\$60,000-\$79,999	82	17.7
\$80,000-\$99,999	85	18.3
\$100,000 or more	226	48.7
Providing 9/11/01 Mental Health Service	481	
Providing service	293	60.9
None	188	39.1
Supervision	478	
Currently Receiving	246	51.5
Not Receiving	232	48.5
Individual Supervision	244	
Yes	136	55.7
No	108	44.3
Group Supervision	242	
Yes	91	37.6
No	151	62.4
Peer Group Supervision	241	
Yes	86	35.7
No	155	64.3
Discussion of 9/11/01 Reactions with Supervisors	429	
Discussing	173	40.0
Not discussing	256	60.0
Supervising Others	476	
Yes	269	56.5
No	207	43.5

Note. (N=481) N is less than 481 due to missing values.

As displayed in Table 2, since the sample was drawn from the lists of Manhattan Chapters of the National Associations of Social Workers (NASW) with the condition of having a Master's degree or doctorate, a majority of the responders (71%; N=335) had the MSW degree; 3 % of the social workers (N=15) had master degrees in other field besides social work; 15% of the social workers had a Ph.D. (N=69) in Social Work. Eight percent of the social workers had two or more degrees. Although about 30 % of the social workers had earned other degrees in addition to or besides the MSW degree, all of the social workers were licensed members of the NASW.

The New York City social workers' income ranged from less than \$ 19,999 to over \$100,000. Almost half of the sample (48.7%) earned \$100,000 or more, with only 15.3% earning less than \$60,000.

The average weekly hours of direct practice with clients by the New York City social workers was about 23 (SD=11.14), with the range of one hour to 65 hours.

The average number of years working in the field post-MSW for the New York City social workers was about 26 years (SD=9.77) with a range of two years to 60 years.

As Table 3 shows, the New York City social workers worked with a variety of client types. The top five client population categories include the following: adult survivors of childhood sexual abuse (72%; N=339); substance abusers (64%; N=303); individuals with eating disorders (58%; N=273); 9/11/01 victims, workers, family members, and/or witnesses (54%; N=254); and individuals who experienced multiple traumas (48%; N=228). Nearly 40% of the social workers responded to rape survivors (39%; N=185) or victims of domestic/partner violence (38%; N=180).

**Table 3. Case Type**

Variable	N	%
	473	
Adult Survivors of Childhood Sexual Abuse		
Yes	339	71.7
No	134	28.3
Child Sexual Abuse		
Yes	91	19.2
No	382	80.8
Domestic/Partner Violence		
Yes	180	38.1
No	293	62.0
September 11th victims		
Yes	254	53.7
No	219	46.3
Survivors of Natural Disasters		
Yes	45	9.5
No	428	90.5
Rape Survivors		
Yes	185	39.1
No	288	60.9
Adult Physical Assault Survivors		
Yes	129	27.3
No	344	72.7
Child Physical Assault Survivors		
Yes	89	18.8
No	384	81.2
Substance Abusers		
Yes	303	64.1
No	170	36.0
Eating Disorders		
Yes	273	57.7
No	200	42.3
Multiple Traumas		
Yes	228	48.2
No	245	51.8
Elder Abuse		
Yes	29	6.1
No	444	93.9
Holocaust Survivors		
Yes	87	18.4
No	386	81.6
Accident Victims		
Yes	84	17.8
No	389	82.2
Neglect		
Yes	120	25.4
No	353	74.6
Other Trauma Survivors		
Yes	94	19.9
No	379	80.1

Note. (N=481) N is less than 481 due to missing values.

Two hundred ninety-three (61%) of the social workers had experience as 9/11/01 volunteers or paid mental health service providers, while 188 (39%) of the social workers did not assist the victims.

The majority of the social workers in New York City (85%; N=411) worked in a private practice. As Table 4 illustrates, a sole practitioner in private practice averaged 21 hours per week of work (SD=11.54).

Table 4 also shows that one-half (52%; N=246) of the New York City social workers received supervision or consultation. More than half of the social workers in New York City (57%; N=269) took the role of supervising others in their workplace. The social workers averaged two hours per week (SD=8.73) as providers of supervision.

**Table 4. Mean Scores of Length in Practice and Supervision**

Variable	N	M (SD)	Observed Range
Hours of Direct Practice with Clients	474	22.83 hours (11.14)	1 hour - 65 hours
Hours of Private Practice as Solo Practitioner	411	21.32 hours(11.54)	1 hour - 55 hours
Hours of Supervising Others	464	2.24 hours (8.73)	0 hour -180 hours
Years of Field Experience Post-MSW	469	26.35 years (9.77)	2 years - 60 years

Note: (N=481) N is less than 481 due to missing values.

### 6.1.3. Levels of Exposure to Traumatized Clients

As Table 5 illustrates, the average percentage of time per week with clients addressing trauma per week was 27 % (SD=22.83), with a range from 0 % to 100 %. The average of the percentage of time of contact with traumatized clients per week for the social workers assisting victims of 9/11/01 was 29 % (SD=23.01), with a range from 0 % to 100 %.

On average, 5.26 types of trauma-related cases or traumatized populations (SD=3.11) were reported, with the range from 0 to 14 types. On average, the social workers assisting the victims

of 9/11/01 responded to 5.63 types of trauma-related cases or traumatized populations (SD=3.02), with a range from 0 to 14 types.

Among the 293 social workers who assisted the victims of 9/11/01, 250 of the social workers indicated the number of hours they spent providing mental health services to the victims of 9/11/01. The median number of hours of contact with the 9/11/01 victims through 9/11/01 mental health services was 30.00 hours, with a range from 0 hour to 10000 hours.

**Table 5. Mean Scores of Exposure to Traumatized Populations**

Variable	N	Mean/Median (SD)	Observed Range
A. % of Time with Trauma Clients per Week	419	26.74 % (22.83)	0%-100%
B. % of Time with Trauma Clients per Week for 9/11/01 Mental Health Providers	269	28.56% (23.01)	0%-100%
C. Number of Current Trauma Case Types	481	5.26 Types (3.11)	0 type -14 type
D. Number of Current Trauma Case Types for 9/11/01 Mental Health Providers	293	5.63 Types (3.02)	0 type -14 type
E. Hours of Contact with 9/11/01 Victims for 9/11/01 Mental Health Providers	250	30.00 hours(739.42)	0hour-10000 hours

Note: Variable A & C→(N=481). If N is less than 481, it is from missing values.  
 Variable B,D, & E→(N=293). If N is less than 293, it is from missing values.  
 Variable E→The median is provided for Hours of Contact with 9/11/01 Victims for 9/11/01 Mental Health Providers due to the highly skewed distribution for this variable.

**6.1.4. Levels of Social Support and Training for 9/11/01 Trauma Workers**

Table 6 indicates the levels of social support and training received by the social workers who assisted the victims of 9/11/01 (N=293). One hundred-twenty social workers (42 %) received supervision during their work in the 9/11/01 event. As Table 6 further shows, less than half (40%; N=173) of the social workers with supervision discussed their 9/11/01 reactions with their supervisors.

Also, most of the social workers (89%; N=254) who assisted the 9/11/01 victims received peer support from colleagues during their work. Most (89%; N=254) received personal support from their family members or friends (See Table 6).



Only a few social workers (25%, 72 social workers) had disaster-specific training prior to the 9/11/01 event. Also, 69% of the social workers did not receive adequate training for the job during their work with the 9/11/01 event (See Table 6).

**Table 6. Social Support and Training for 9/11/01 Mental Health Providers**

Variable		N	%
Supervision for 9/11/01 mental health providers	Answered	284	
	Receiving	120	42.3
Peer Support during 9/11/01 Event	Answered	286	
	Receiving	254	88.8
Personal Support during 9/11/01 Event	Answered	284	
	Receiving	254	89.4
Disaster Training before 9/11/01	Answered	289	
	Receiving	72	24.9
Adequate Training during 9/11/01	Answered	278	
	Receiving	86	30.9

Note: (N=293) N is less than 293 due to missing values.

### 6.1.5. Levels of Secondary Traumatic Stress

The overall mean score for secondary traumatic stress for the total sample (N=481) was 12.24 (SD=5.35). According to Stamm (2009), who created the Professional Quality of Life Scale (PROQL), including the scale of secondary traumatic stress which this study used, a combined score on secondary traumatic stress less than 22 is considered low; scores between 23 and 41 are average; and scores above 42 are high. Therefore, the average score range for the social workers in New York City was low. The overall mean score for secondary traumatic stress for the social workers assisting victims of 9/11/01 victims (N=293) was 12.47 (SD=5.42), also in the low range.

**Table 7. Summary of Descriptive Results in All of the Non-Dichotomous Variables**

	Age	Income	Hours per Week in the Field	Years in the Field	Hours of Assisting 9/11/01 Victims	% of Trauma Caseload	Number of Trauma Case Types	Secondary Traumatic Stress
N	473.00	464.00	474.00	469.00	250.00	419.00	481.00	455.00
Mean	59.83	4.96	22.80	26.35	180.12	26.70	5.26	12.24
Median	61.00	5.00	22.50	26.00	30.00	20.00	5.00	12.00
Mode	64.00	6.00	20.00	30.00	20.00	10.00	5.00	13.00
Std.Deviation	9.30	1.24	11.14	9.77	739.42	22.83	3.11	5.35
Skewness	-0.38	-0.96	0.21	0.20	10.56	1.17	0.34	0.34
Kurtosis	1.35	0.02	-0.20	0.11	130.43	0.84	-0.40	0.08
Minimum	26.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00
Maximum	89.00	6.00	65.00	60.00	10000.00	100.00	14.00	32.00

The above table 7 summarizes the descriptive results for all of the non-dichotomous variables among the test and control variables used in this study. The frequencies are very skewed in the variables of income, hours of assisting 9/11/01 victims, and percentage of trauma caseload (income:-0.96 and 0.02; hours of assisting 9/11/01 victims:10.56 and 130.43; percentage of trauma caseload: 1.17 and 0.84). Therefore, in order to do the analyses of correlations and regression, I fixed the three variables for their normal distribution through recoding or log-transformation. Specifically, recoding changed the values of the skewness and kurtosis for income to 0.05 and -2.01, and the ones for the percentage of trauma caseload to 0.59 and -0.91. Through log-transformation, the values of the skewness and kurtosis for the hours of assisting 9/11/01 victims came to be 0.63 and 0.53.

## 6.2. Bivariate Correlations for Test and Control Variables

### 6.2.1. Correlations for Secondary Traumatic Stress and Trauma Exposure, Protective, and Demographic Variables

In this study, I first examined the association between secondary traumatic stress and the following four factors: 1) independent variable, 2) exposure to 9/11/01 victims, 3) percentage of trauma caseload, and 4) number of trauma cases). As Table 8 suggests, being a 9/11/01 mental health provider did not increase the level of secondary traumatic stress for social workers ( $r=-.05$ ,  $p>.10$ ,  $N=455$ ). Also, the 9/11/01 mental health providers with more hours of assisting 9/11/01 victims did not exhibit an increase in secondary traumatic stress ( $r=-.05$ ,  $p>.10$ ,  $N=236$ ). As expected, social workers with the greatest percentage of contact time with traumatized clients did experience the most secondary traumatic stress ( $r=.21$ ,  $p<.001$ ,  $N=398$ ). A greater number of trauma cases also led to a higher degree of secondary traumatic stress ( $r=.11$ ,  $p=.022$ ,  $N=455$ ).

Secondly, I examined how presumed protective variables (supervision, peer and personal support, and training before and after 9/11/01) would contribute to decreasing the level of secondary traumatic stress for the subsample (9/11/01 mental health providers). The social workers receiving supervision tended to have a higher level of secondary traumatic stress ( $r=.11$ ,  $p=.08$ ,  $N=271$ ) than those who did not receive supervision; this result contradicted the expectation that supervision would decrease the level of secondary traumatic stress. Also contrary to expectation, more peer support did not decrease the level of secondary traumatic stress in social workers ( $r=.001$ , ns,  $N=272$ ); even more personal support from family members/friends did not lower the social workers' level of secondary traumatic stress ( $r=.10$ ,  $p=.11$ ,  $N=270$ ). The social workers with more disaster training before the 9/11/01 event did not experience a lessening in their levels of secondary traumatic stress ( $r=.04$ , ns); the social workers

with more adequate training during the 9/11/01 event did not notice any reduction of their secondary traumatic stress level ( $r=-.04$ , ns).

Third, I examined whether or not demographic variables would have an effect on the level of secondary traumatic stress. Older social workers reported less secondary traumatic stress ( $r=-.10$ ,  $p=.045$ ,  $N=448$ ). Being single did not significantly increase the social workers' level of secondary traumatic stress ( $r=-.07$ ,  $p=.16$ ,  $N=446$ ). Higher income had no correlation with lowering the social workers' level of secondary traumatic stress ( $r=-.05$ ;  $p=.27$ ,  $N=438$ ). Social workers with more hours of direct contact with clients did not experience a significant increase in their level of secondary traumatic stress ( $r=.03$ , ns,  $N=449$ ). However, the more experienced social workers (social workers with longer years in the field) did notice a decrease in their level of secondary traumatic stress ( $r=-.14$ ,  $p=.004$ ,  $N=444$ ) (See Table 8).

## Secondary Traumatic Stress

**Table 8. Bivariate Correlations for Test and Control Variables**

Variable	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Secondary Traumatic Stress	455														
2. 9/11/01 Mental Health Providers or None	481	.05													
3. Hours of Assisting 9/11/01 Victims	250	-.05													
4. % of Trauma Caseload	417	.21***	.11**	.09											
5. Number of Trauma Case Types	481	.11**	.15***	.19***	.49***										
6. Supervision	284	.11*		.27***	.07	.15**									
7. Peer Support	286	.00		.05	-.06	.14**	.05								
8. Personal Support	284	.10		.05	.08	.14**	.08	.38***							
9. Disaster Training before 9/11/01	289	.04		.27***	.21***	.16**	.10	.04	.06						
10. Adequate Training during 9/11/01	278	-.04		.09	-.01	.02	.28***	.02	-.02	.18***					
11. Age	473	-.10**	.05	-.02	-.17***	-.24***	-.12**	-.02	-.04	.04	.01				
12. Marital Status (Single vs Married)	481	-.07	.02	-.04	-.03	-.03	-.09	.03	.08	-.05	-.00	.05			
13. Income	464	-.05	.09*	-.00	-.06	-.02	-.11*	.13**	.07	-.04	-.13**	.10**	.23***		
14. Hours per Week in the Field	474	.03	.05	-.05	.19***	.30***	-.02	.02	.15**	-.06	-.04	-.11**	.04	.18***	
15. Years in the Field	469	-.14***	.01	.08	-.15**	-.17***	-.19***	.04	-.08	.12*	.05	.59***	.03	.22***	-.05

\*p<.10, \*\*p<.05, \*\*\*p<.01

Note: 1,2, 4,5, 11-15 variables→Analysis in total sample (N=481)

3, 6-10 variables→Analysis in subsample (N=293)

### 6.2.2. Correlations among Trauma Exposure Variables

In this study, I examined the inter-correlations of the following independent variable indicators: service as a 9/11/01 mental health provider; hours of assisting 9/11/01 victims; percentage of trauma caseload; and number of trauma cases. Being a 9/11/01 mental health provider increased the social workers' exposure to trauma, percentage of trauma caseload ( $r=.11$ ,  $p=.03$ ,  $N=417$ ), and number of trauma cases ( $r=.15$ ,  $p=.001$ ,  $N=481$ ) for social workers (total sample). The 9/11/01 mental health providers with more hours of assisting 9/11/01 victims did not experience an increase in the percentage of their trauma caseload ( $r=.09$ ,  $p=.16$ ,  $N=231$ ), but did experience an increase in the numbers of trauma case types ( $r=.19$ ,  $p=.002$ ,  $N=250$ ). A greater percentage of trauma caseload led to an increased number of trauma cases for social workers ( $r=.49$ ,  $p<.001$ ,  $N=417$ ).

### 6.2.3. Correlations between Trauma Exposure and Protective and Demographic Variables

I examined what correlation would exist between the independent variables in this study, as well as the degree of traumatized populations (hours of assisting 9/11/01 victims, percentage of trauma caseload, and number of trauma cases), and receiving such protective factors as supervision, peer and personal support, and training before and after 9/11/01. First, as Table 8 illustrates, the 9/11/01 mental health providers with more hours of assisting 9/11/01 victims received more supervision ( $r=.27$ ,  $p<.001$ ,  $N=242$ ) and disaster training before the 9/11/01 event ( $r=.27$ ,  $p<.001$ ,  $N=246$ ). Second, the 9/11/01 mental health providers with a higher percentage of trauma caseload received more disaster training before the 9/11/01 event ( $r=.21$ ,  $p=.001$ ,  $N=264$ ). Third, the 9/11/01 mental health providers with a greater number of trauma case types received more supervision ( $r=.15$ ,  $p=.01$ ,  $N=284$ ), more peer support ( $r=.14$ ,  $p=.02$ ,  $N=286$ ), more

personal support ( $r=.14$ ,  $p=.02$ ,  $N=284$ ), and more disaster training before the 9/11/01 event ( $r=.16$ ,  $p=.01$ ,  $N=289$ ).

Furthermore, I examined how social workers' demographics (age, marital status, income, hours per week in the field, and years in the field) would affect the social workers' level of trauma exposure (being a 9/11/01 mental health provider/hours of assisting 9/11/01 victims, percentage of trauma caseload, and number of trauma cases). First, younger social workers responded to a higher percentage of trauma cases ( $r=-.17$ ,  $p<.001$ ,  $N=411$ ); social workers with more hours of direct contact with their clients responded to a higher percentage of trauma cases ( $r=.19$ ,  $p<.001$ ,  $N=416$ ); less experienced social workers (social workers with fewer years in the field) responded to a higher percentage of trauma cases ( $r=-.15$ ,  $p=.003$ ,  $N=411$ ). Second, younger social workers responded to a greater numbers of trauma case types ( $r=-.24$ ,  $p<.001$ ,  $N=473$ ); social workers with more hours of direct contact with their clients responded to greater numbers of trauma case types ( $r=.30$ ,  $p<.001$ ,  $N=474$ ); less experienced social workers responded to greater numbers of trauma case types ( $r=-.17$ ,  $p<.001$ ,  $N=469$ ).

As Table 8 illustrates, some demographics for the 9/11/01 mental health providers significantly influenced how much supervision, peer and personal support, and disaster training before and after 9/11/01 event (presumed protective variables) the social workers received. Social workers with more supervision tended to be younger ( $r=-.12$ ,  $p<.05$ ,  $N=279$ ) and have fewer years of field experience ( $r=-.19$ ,  $p=.001$ ,  $N=279$ ). Social workers with a higher income tended to receive more peer support ( $r=.13$ ,  $p<.05$ ,  $N=276$ ) and less adequate training during the 9/11/01 event ( $r=-.13$ ,  $p<.05$ ,  $N=267$ ). Social workers with more hours of direct contact with their clients tended to receive more personal support ( $r=.15$ ,  $p=.01$ ,  $N=282$ ).

### 6.3. Multivariate Analyses

#### 6.3.1. Test of Research Model 1: Regression of Secondary Traumatic Stress on Trauma

##### Exposure and Demographics for Total Sample

As the previous method chapter describes, this regression model used a total sample number of 373. The total number of social workers for this regression analysis decreased from 481, the original total of study participants, to 373 due to the number of non-responding participants in terms of trauma exposure variables (64), secondary traumatic stress (26), and demographic variables (53). Table 8 shows that a multiple linear regression analysis was employed to predict the degree of secondary traumatic stress that the social workers in New York City experienced due to their level of exposure to traumatized populations. A regression model was constructed based on the two research models described in the previous chapter. Regression analyses on the first research model (See Figure 1) were used to determine how the social workers' level of exposure to traumatized populations and the social workers' demographic characteristics together contributed to their secondary traumatic stress symptoms for the total sample.

In the original research model in Figure 1, the regression model was designed to test demographic variables (age, marital status, income, hours per week in the field, and years in the field) and the level of trauma exposure as independent variables (being a 9/11/01 mental health provider, percentage of caseload with all forms of traumatized clients, and number of different types of traumatized clients in caseload) for the total sample (N=373).

As Table 9 shows, the trauma exposure block explained a significant amount of the variance in the level of secondary traumatic stress ( $F(3, 364)=4.74, p<.01, R^2=.037$ ). The demographics block did not explain a significant amount of the variance in the level of secondary traumatic stress ( $F(5, 367)=.993, p>.01, R^2=.013$ ). Therefore, controlling for all demographics (age, marital



status, income, hours per week, and years in the field), the level of exposure to traumatized clients predicted the degree of secondary traumatic stress experienced. In particular, one of the independent variables-the percentage of caseload with all forms of traumatized clients ( $\beta=.17$ ,  $p=.003$ )-made the only statistically significant contribution to the model. Having a high percentage of traumatized clients contributed to higher levels of secondary traumatic stress. None of the other variables made significant contributions in predicting secondary traumatic stress.

*Table 9. Regression of Secondary Traumatic Stress on General Trauma Exposure and Demographics (N= 373)*

	Demographics	Trauma Exposure
	Model 1	Model 2
	B(r)	$\beta$ (r)
Demographics (R <sup>2</sup> =0.013)		
Age	-0.01(-0.06)	
Marital Status	-0.07(-0.07)	
Income	0.01(-0.03)	
Hours per Week in the Field	0.01(0.01)	
Years in the Field	-0.08(-0.09)	
Trauma Exposure (R <sup>2</sup> =0.037***)		
Being a 9/11/01 Mental Health Provider		0.03(0.05)
Percentage of Trauma Caseload		0.17(0.19)***
Number of Trauma Case Type		0.04(0.12)

\* $p<.10$  , \*\* $p<.05$ , \*\*\* $p<.01$

Note: R<sup>2</sup> is the variance explained by the block.

Because none of the demographic variables in block 1 in the above regression analysis predicted secondary traumatic stress and because inclusion of the demographic variables produced a loss of 25 cases, I re-ran the same regression analysis, excluding the demographic block. Without the demographic block, the regression analysis showed that the trauma exposure block explained a significant amount of the variance in the level of secondary traumatic stress

( $F(3, 394)=6.12, p<.01, R^2=.045$ ); This result is almost the same as the above regression analysis for the total sample ( $N=373$ ) with the demographic block ( $F(3, 364)=4.74, p<.01, R^2=.037$ ).

### **6.3.2. Follow-up Analysis for Research Model 1: Buffers of Demographic Variables**

I conducted this analysis to explore whether or not the predicted effect of trauma exposure might be present or more pronounced for some demographic characteristics (Ex: younger social workers versus older social workers). This follow-up analysis, based on the above regression model (in 6.3.1.), examined whether each demographic variable (age, marital status, income, hours per week in the field, and years in the field) might moderate a quality of the relationship of the level of secondary traumatic stress and amount of exposure to traumatized clients. Possible moderation by these demographic variables was explored by running separate regressions for age subgroups (social workers younger than 61-years-old versus social workers 61-years-old or more), marital status subgroups (single versus married), income subgroups (lower-income workers earning less than \$100,000 versus higher-income workers earning \$100,000 or more), subgroups of hours per week in the field (workers with fewer than 23 hours versus workers with 23 hours or more), and subgroups of years in the field (less experienced workers with fewer than 27 years versus more experienced workers with 27 years or more). Each of these demographic variables was divided into dichotomous variables whose proportion of lower and higher value came to the half (Ex: the proportion of the younger social workers was 49.9% and the one of the older social workers was 50.1%).

As Table 10 illustrates, the findings in the subgroup tests show that the following demographic variables might act as moderators: age, income, hours of direct practice per week, and years in the field. In particular, the results show the most difference in terms of the social

workers' age and years of experience based on the betas of the percentage of trauma caseloads. Older and more experienced social workers are more vulnerable to experiencing greater levels of secondary traumatic stress. I re-ran the same regression follow-up analysis by selecting the cases of the following three types of age categories: social workers younger than 49-years-old (N=47), middle-aged social workers between 50- and 59-years-old (N=123), and social workers older than 60-years-old (N=203). According to the results, trauma exposure for only the oldest social workers significantly contributed to increasing their levels of secondary traumatic stress ( $F(3,195)=4.24, p<.01, R^2=.059$ ), whereas trauma exposure did not affect either the youngest social workers ( $F(3,39)=0.53, p=.67, R^2=.035$ ) or the middle-aged social workers ( $F(3,115)=.77, p=.51, R^2=.019$ ). Social workers with more income and less hours of direct contact with their clients are also more vulnerable to experiencing greater levels of secondary traumatic stress, although the levels of income and hours of direct contact with clients showed less differences based on the betas of the percentage of trauma caseloads. However, given the possibility of the buffering roles of age and years in the field, it makes sense that income and hours of direct contact with traumatized clients would also buffer the level of secondary traumatic stress experienced by older, more experienced social workers. Due to their supervisory positions, these older and more experienced social workers might have more income and fewer hours of direct contact with their clients. Further, I explored the possibility of the moderation effect on marital status by running separate regressions for cohabiting social workers (N=241) and non-cohabiting social workers (N=137). The results indicated that the cohabiting social workers might be more impacted by trauma exposure ( $F(3,233)=2.94, p<.05, R^2=.035$ ) compared with the non-cohabiting social workers ( $F(3,129)=1.75, p=.16, R^2=.039$ ).

Table 10. Subgroup Analyses based on Demographic Variables on Research Model 1

Younger Social Workers (N=191)

	Demographics	Trauma Exposure
	Model 1	Model 2
	B (r)	B(r)
Demographics (R <sup>2</sup> =0.018)		
Marital Status	-0.04(-0.05)	
Income	-0.04(-0.04)	
Hours per Week in the Field	0.11(0.10)	
Years in the Field	-0.05(-0.06)	
Trauma Exposure (R <sup>2</sup> =0.025)		
9/11/01 Mental Health Providers		0.04(0.06)
Percentage of Trauma Caseload		0.13(0.17)
Number of Trauma Case Types		0.05(0.13)

F(3, 183)=1.61, p=.19; \*p<.10, \*\*p<.05, \*\*\*p<.01  
 Note: R<sup>2</sup> is the variance explained by block.

Older Social Workers (N=182)

	Demographics	Trauma Exposure
	Model 1	Model 2
	B(r)	B (r)
Demographics (R <sup>2</sup> =0.036)		
Marital Status	-0.12(-0.10)	
Income	0.08(-0.01)	
Hours per Week in the Field	-0.11(-0.10)	
Years in the Field	-0.13*(-0.11)	
Trauma Exposure (R <sup>2</sup> =0.059**)		
9/11/01 Mental Health Providers		0.00(0.04)
Percentage of Trauma Caseload		0.23(0.22)***
Number of Trauma Case Types		0.03(0.10)

F(3, 174)=3.78, p=.01; \*p<.10, \*\*p<.05, \*\*\*p<.01  
 Note: R<sup>2</sup> is the variance explained by block.

Single Social Workers (N=161)

	Demographics	Trauma Exposure
	Model 1	Model 2
	B(r)	B(r)
Demographics (R <sup>2</sup> =0.009)		
Age	-0.08(-0.03)	
Income	0.06(0.07)	
Hours per Week in the Field	-0.01(0.01)	
Years in the Field	0.07(0.03)	
Trauma Exposure (R <sup>2</sup> =0.046*)		
9/11/01 Mental Health Providers		0.06(0.09)
Percentage of Trauma Caseload		0.16(0.20)*
Number of Trauma Case Types		0.08(0.13)

F(3, 153)=2.48, p=.06; \*p<.10, \*\*p<.05, \*\*\*p<.01  
 Note: R<sup>2</sup> is the variance explained by block.

Married Social Workers (N=212)

	Demographics	Trauma Exposure
	Model 1	Model 2
	B (r)	B(r)
Demographics (R <sup>2</sup> =0.048**)		
Age	0.05(-0.09)	
Income	-0.04(-0.08)	
Hours per Week in the Field	0.03(0.02)	
Years in the Field	-0.23(-0.21)***	
Trauma Exposure (R <sup>2</sup> =0.027)		
9/11/01 Mental Health Providers		-0.01(0.01)
Percentage of Trauma Caseload		0.16(0.19)**
Number of Trauma Case Types		0.02(0.11)

F(3, 204)=1.96, p=.12; \*p<.10, \*\*p<.05, \*\*\*p<.01  
 Note: R<sup>2</sup> is the variance explained by block.

## Secondary Traumatic Stress

Lower-Income Workers (N=200)

	Demographics	Trauma Exposure
	Model 1	Model 2
	B (r)	B(r)
Demographics (R <sup>2</sup> =0.010)		
Age	0.06(0.04)	
Marital Status	-0.01(-0.01)	
Hours per Week in the Field	0.09(0.08)	
Years in the Field	-0.01(0.01)	
Trauma Exposure (R <sup>2</sup> =0.029)		
9/11/01 Mental Health Providers Percentage of Trauma Caseload		0.06(0.09)
Number of Trauma Case Types		0.15(0.16)*
		0.02(0.09)

F(3, 192)=1.94, p=.12; \*p<.10, \*\*p<.05, \*\*\*p<.01  
Note: R<sup>2</sup> is the variance explained by the block.

Higher-Income Workers (N=173)

	Demographics	Trauma Exposure
	Model 1	Model 2
	B(r)	B(r)
Demographics (R <sup>2</sup> =0.071**)		
Age	-0.11(-0.19)	
Marital Status	-0.14(-0.15)*	
Hours per Week in the Field	-0.08(-0.06)	
Years in the Field	-0.13(-0.19)	
Trauma Exposure (R <sup>2</sup> =0.050**)		
9/11/01 Mental Health Providers Percentage of Trauma Caseload		-0.03(0.01)
Number of Trauma Case Types		0.20(0.23)**
		0.06(0.16)

F(3, 165)=3.10, p=.03; \*p<.10, \*\*p<.05, \*\*\*p<.01  
Note: R<sup>2</sup> is the variance explained by the block.

Less-Hours Workers (N=191)

	Demographics	Trauma Exposure
	Model 1	Model 2
	B(r)	B(r)
Demographics (R <sup>2</sup> =0.039)		
Age	0.13(0.02)	
Marital Status	-0.09(-0.07)	
Income	0.07(0.03)	
Years in the Field	-0.21(-0.13)**	
Trauma Exposure (R <sup>2</sup> =0.059**)		
9/11/01 Mental Health Providers Percentage of Trauma Caseload		0.07(0.11)
Number of Trauma Case Types		0.19(0.23)**
		0.07(0.16)

F(3, 183)=4.02, p=.01; \*p<.10, \*\*p<.05, \*\*\*p<.01  
Note: R<sup>2</sup> is the variance explained by the block.

More-Hours Workers (N=182)

	Demographics	Trauma Exposure
	Model 1	Model 2
	B(r)	B(r)
Demographics (R <sup>2</sup> =0.039)		
Age	-0.22(-0.15)**	
Marital Status	-0.05(-0.08)	
Income	-0.08(-0.09)	
Years in the Field	0.13(-0.04)	
Trauma Exposure (R <sup>2</sup> =0.018)		
9/11/01 Mental Health Providers Percentage of Trauma Caseload		0.02(-0.01)
Number of Trauma Case Types		0.15(0.15)*
		-0.03(0.07)

F(3, 174)=1.12, p=.34; \*p<.10, \*\*p<.05, \*\*\*p<.01  
Note: R<sup>2</sup> is the variance explained by the block.

Less Experienced Workers (N=199)

	Demographics	Trauma Exposure
	Model 1 B(r)	Model 2 B(r)
Demographics (R <sup>2</sup> =0.003)		
Age	0.02(0.01)	
Marital Status	-0.04(-0.03)	
Income	0.04(0.04)	
Hours per Week in the Field	-0.00(0.00)	
Trauma Exposure (R <sup>2</sup> =0.014)		
9/11/01 Mental Health Providers Percentage of Trauma Caseload		0.00(0.02)
Number of Trauma Case Types		0.10(0.10)
		0.04(0.06)

F(3, 191)=.89, p=.45; \*p<.10, \*\*p<.05, \*\*\*p<.01  
 Note: R<sup>2</sup> is the variance explained by the block.

More Experienced Workers (N=174)

	Demographics	Trauma Exposure
	Model 1 B(r)	Model 2 B(r)
Demographics (R <sup>2</sup> =0.025)		
Age	-0.10(-0.11)	
Marital Status	-0.11(-0.11)	
Income	-0.03(-0.05)	
Hours per Week in the Field	0.03(0.03)	
Trauma Exposure (R <sup>2</sup> =0.078***)		
9/11/01 Mental Health Providers Percentage of Trauma Caseload		0.02(0.08)
Number of Trauma Case Types		0.27(0.29)***
		0.03(0.16)

F(3, 166)=4.78, p=.00; \*p<.10, \*\*p<.05, \*\*\*p<.01  
 Note: R<sup>2</sup> is the variance explained by the block.

**6.3.3. Test of Research Model 2: Regression of Secondary Traumatic Stress on**

**Demographics, Protectors, Trauma Exposure, and Interaction Effects for Subsample**

I employed a multiple linear regression analysis to predict the degree of secondary traumatic stress that the subsample of 225 New York City social workers (who provided mental health services to the victims of 9/11/01) experienced due to 1) level of exposure to traumatized clients, 2) presumed protective factors, such as supervision or peer support, that reduce traumatic stress symptoms, and 3) interaction of protective factors with trauma exposure. The main effects of the interaction predictions were done by controlling for demographic factors. Regression analyses on the second research model in the previous chapter (See Figure 2) were used to determine how the 9/11/01 mental health providers’ level of exposure to traumatized clients and their demographic characteristics together contributed to their secondary traumatic stress symptoms as well as to how social support and training received by the 9/11/01 mental health social workers might

buffer their level of secondary traumatic stress.

The original regression research model (Figure 2 in previous chapter) was designed to test demographic variables (age, marital status, income, hours per week in the field, and years in the field), independent variables (hours of assisting 9/11/01 victims, percentage of caseload with all forms of traumatized clients, and number of different types of traumatized clients in caseload), and presumed protective variables (supervision, peer support, personal support, disaster-specific training, 9/11/01 specific training) for the subsample of the social workers (N=225) in relation to secondary traumatic stress. However, I decided to exclude the variable of hours of assisting the 9/11/01 victims from the trauma exposure set because it was not significantly related with secondary traumatic stress in the bivariate correlations; specifically, the direction of the correlation was opposite to expectation ( $r=-.05$ ). In addition, the total subsample of the social workers decreased from 293, the original total of the social workers responding to the 9/11/01 victims, to 225 due to the number of non-responding participants in terms of trauma exposure variables (24), secondary traumatic stress (14), demographic variables (29), and presumed protective variables (25). The regression model also tested whether or not the presumed protective variables would moderate the relationship between the level of exposure to traumatized clients and the level of secondary traumatic stress (block 4).

According to the results of the regression analysis, trauma exposure (the percentage of trauma caseload and the number of trauma case types) by the 9/11/01 mental health providers (N=225) did not predict the social workers' level of secondary traumatic stress after controlling all of the demographics and potential moderators ( $F(2,212)=1.69$ ,  $p=.19$ ,  $R^2=.015$ ). Peer support, the only factor of the five potential moderators including supervision, personal support, disaster training before 9/11/01, and adequate training during 9/11/01, marginally moderated the

relationship between the level of exposure to traumatized clients and the level of secondary traumatic stress after controlling all of the demographics for the 9/11/01 mental health providers (N=225) ( $F(2, 210)=2.36, p=.097, R^2=.021$ ). In particular, the number of trauma case types ( $\beta=.57, p=.04$ ) and the interaction of the number of trauma case types and peer support ( $\beta=-0.64, p=.04$ ) made a statistically significant contribution to the model (See Table 10).

Because none of the demographic variables in block 1 in the above regression analysis predicted secondary traumatic stress and because cases were lost due to missing values on demographics, I re-ran the same regression analysis, excluding the demographic block (N=238). Without the demographic block, the regression analysis showed that the interaction of peer support and trauma exposure variables marginally predicted the level of secondary traumatic stress ( $F(2, 228)=2.55, p=.08, R^2=.021$ ). This result was almost same as the above regression analysis with the demographic block ( $F(2, 210)=2.36, p=.097, R^2=.021$ ).

Table 11 does not show the non-significant protective moderators. The following protective variables were not moderators for buffering the level of secondary traumatic stress experienced by the subsample of social workers exposed to traumatized clients: supervision ( $F(2, 210)=0.01, p=.99, R^2=.000$ ); personal support ( $F(2, 210)=0.17, p=.85, R^2=.002$ ); disaster training before 9/11/01 ( $F(2, 210)=0.64, p=.53, R^2=.006$ ); and adequate training during 9/11/01 ( $F(2, 210)=1.42, p=.25, R^2=.013$ ).



Table 11. Regression of Secondary Traumatic Stress on Trauma Exposure, ALL Protectors, Interaction Effects of Peer Support and Trauma Exposure, and Demographics (N=225)

	Demographics Model 1 B(r)	Protectors Model 2 B(r)	Trauma Exposure Model 3 B(r)	Interaction Model 4 B(r)
<b>Demographics (R<sup>2</sup>=0.026)</b>				
Age	-0.05(-0.09)			
Marital Status	-0.12(-0.13)*			
Income	-0.04(-0.07)			
Hours per Week in the Field	-0.002(-0.01)			
Years in the Field	-0.05(-0.09)			
<b>Protectors (R<sup>2</sup>=0.012)</b>				
Supervision		0.08(0.09)		
Peer Support		-0.03(-0.02)		
Personal Support		0.06(0.06)		
Disaster Training before 9/11/01		-0.002(0.00)		
Adequate Training during 9/11/01		-0.07(-0.04)		
<b>Trauma Exposure (R<sup>2</sup>=0.015)</b>				
Percentage of Trauma Caseload			0.11(0.15)	
Number of Trauma Case Types			0.04(0.10)	
<b>Interaction of Trauma Exposure &amp; BRI (R<sup>2</sup>=0.021*)</b>				
Interaction of Percentage of Trauma Caseload & Peer Support				0.17(0.10)
Interaction of Number of Trauma Case Types & Peer Support				-0.64(0.03)**

\*p<.10, \*\*p<.05, \*\*\*p<.01

Note: R<sup>2</sup> is the variance explained by the block.

In addition, I examined whether the index formed by combining the protective variables (the Buffering Resource Index, BRI) would buffer the level of secondary traumatic stress for the 9/11/01 mental health providers (N=242), but the regression result indicated that the sum of all of the presumed protectors (BRI) was not a significant moderator (F(2, 231)=0.20, p=.82, R<sup>2</sup>=.002). It is important to note, however, that the main effect of trauma exposure (reflected in the percentage of traumatized clients in the caseload) was significant in this analysis that controls for the protective factors as well as the demographic variables (F(2, 233)=2.99, p=.05, R<sup>2</sup>=.024) (See Table 12).

*Table 12. Regression of Secondary Traumatic Stress on Trauma Exposure, BRI, Interaction Effects of BRI and Trauma Exposure, and Demographics (N=242)*

	Demographics	Protectors	Trauma Exposure	Interaction
	Model 1 B(r)	Model 2 B(r)	Model 3 B(r)	Model 4 B(r)
Demographics (R <sup>2</sup> =0.020)				
Age	-0.06(-0.08)			
Marital Status	-0.10(-0.11)			
Income	-0.03(-0.06)			
Hours per Week in the Field	-0.01(-0.02)			
Years in the Field	-0.04(-0.07)			
Protectors (R <sup>2</sup> =0.001)				
Buffering Resource Index (BRI)		0.03(0.04)		
Trauma Exposure (R <sup>2</sup> =0.024*)				
Percentage of Trauma Caseload			0.13(0.17)*	
Number of Trauma Case Types			0.06(0.12)	
Interaction of Trauma Exposure & Peer Support (R <sup>2</sup> =0.002)				
Interaction of Percentage of Trauma Caseload & BRI				0.08(0.15)
Interaction of Number of Trauma Case Type & BRI				-0.15(0.09)

\*p<.10, \*\*p<.05, \*\*\*p<.01

Note: R<sup>2</sup> is the variance explained by the block.

#### **6.3.4. Subgroup Analysis in Peer Support Group (N=225) versus No-Peer Support Group (N=27)**

To examine whether or not peer support acted as a buffer, I conducted a subgroup regression analysis, examining separate cases of those social workers with peer support (peer support group, N=225) versus those social workers without peer support (non-peer support, N=27). As Table 13 illustrates, the peer support group and no-peer support group had differences in the zero-order correlations of each trauma exposure variable and secondary traumatic stress. The zero-order correlations of each trauma exposure variable and secondary traumatic stress for the peer support group were .17 (percentage of caseload with all forms of traumatized clients) and .06 (number of different types of traumatized clients in caseload), while the zero-order correlations for the no-

peer support group were .23, and .43, respectively. As expected for the no-peer support group, the zero-order correlations showed stronger relationships of exposure with secondary traumatic stress. Therefore, social workers with no peer support tend to be more affected by trauma exposure and to have greater levels of secondary traumatic stress than the social workers with peer support.

*Table 13. Regression of Secondary Traumatic Stress on Exposure to Traumatized Clients in Peer Support Group (N=225) versus Non-Peer Support Group (N=27)*

Peer Support Group		No-Peer Support Group	
Model 1: Trauma Exposure (R <sup>2</sup> =.03**)	r	Model 1: Trauma Exposure (R <sup>2</sup> =.19*)	r
Percentage of Trauma Caseload	0.17	Percentage of Trauma Caseload	0.23
Number of Trauma Case Types	0.06	Number of Trauma Case Types	0.43

\*p<.10, \*\*p<.05, \*\*\*p<.01

Note: R<sup>2</sup> is the variance explained by the block.

## **7.0 Discussion and Conclusion**

### **7.1. Introduction and Research Question**

This study 1) explores the risks and protective factors of secondary traumatic stress for social workers assisting traumatized populations, with a special emphasis on those New York City social workers who helped the victims of 9/11/01 and 2) uses those factors to suggest which preventive strategies should be implemented into the field of social work. Specifically, the study aims at determining how the protective factors of secondary traumatic stress contribute to buffering the risk factors and decreasing the level of secondary traumatic stress for the social workers. The major findings of this study for secondary traumatic stress experienced by social workers in New York City through the two research models are as follows:

- a) Social workers who respond to different types of trauma (for total sample of 373) tend to have higher levels of secondary traumatic stress when they are exposed to more traumatized clients.
- b) Peer support marginally buffers the level of secondary traumatic stress experienced by those mental health social workers assisting 9/11/01 victims (for sub-sample of 225).
- c) Older and more experienced social workers who respond to different kinds of traumatized populations (for total sample of 373) had somewhat lower levels of secondary traumatic stress, at least in part because they had less exposure to traumatized clients; those older and more experienced workers may have been more negatively impacted by exposure to traumatized clients, a possibility that may be explored in subsequent investigation.

### **7.2. Level of Secondary Traumatic Stress and Participants' Characteristics**

The average age of the sample for this study was 60-years-old. The social workers in New York City might be older compared with a median age of 51 for the 2004 NASW Practice

Research Network (PRN [2005]) survey, that was randomly administered to 2,000 NASW regular members in 2005. The majority of the social workers were Caucasians living in Manhattan. Almost half of the social workers earned \$100,000 or more; their income was much higher than the median annual income (\$47,200) of NASW members in the 2004 NASW Practice Research Network (PRN [2005]) survey. Furthermore, due to the condition of sampling in this study (having a MSW degree or doctorate), the New York social workers for this study analysis were highly educated; the majority of the social workers in this study have a Master's degree or Doctorate. Most of the social workers had longer periods of field experience as professional social workers since they averaged 26 years of working in the field post MSW; that is longer than the average years (16 years) of social work experience for the typical NASW regular member after earning her/his first social work degree (NASW Practice Research Network , 2005). In addition, the New York City social workers' average hours of direct practice with clients might be lower (about 23 hours per week) compared with the hours logged in by other state social workers (30.88 hours per week) in a secondary traumatic stress study (Bride, 2007). This statistics might relate to the fact that most of the New York City social workers supervised others. Because of their administrative roles, these New York City social workers might have had less direct contact time with traumatized clients, thereby leading to lower levels of secondary traumatic stress.

However, the New York City social workers averaged about 30% of trauma work in their weekly caseload. They also had experience with 5.26 types of trauma-related cases or traumatized populations. The majority of the social workers had assisted traumatized victims of childhood sexual abuse, while about half of the social workers had responded to victims of multiple trauma, rape, or domestic violence. Despite a regular contact with traumatized

populations, these social workers experienced lower levels of secondary traumatic stress. One explanation for this finding might stem from the fact that older, more experienced social workers, like those in the sample population, spent less direct time with traumatized clients. The subgroups analysis (see 6.3.2.) in the previous chapter has indicated that age and years in the field seemed to moderate the effect of trauma exposure. Because the older, more experienced social workers in this study tended to have fewer hours of direct contact with their clients, they might also have less secondary traumatic stress; however, if they have more hours of direct contact with their clients, they might have greater levels of secondary traumatic stress. According to psychological trauma theory, individuals exposed to more incidents of trauma experience an increase in stress (Herman, 1992; Horwitz, 1998; Newman, Kaloupek & Keane, 1996). If older social workers with a higher degree of field experience have more exposure to traumatized clients, their levels of secondary traumatic stress would increase.

### **7.3. Risk Factors of Secondary Traumatic Stress**

#### **7.3.1. Different Types of Trauma Exposure and 9/11/01 Trauma Exposure**

Exposure to different types of traumatized clients for the social workers in New York City (for total sample of 373) contributed to increasing the social workers' level of secondary traumatic stress. In the first regression research model (see chapter six), the level of exposure to traumatized clients predicted the degree of secondary traumatic stress with and without controlling all demographics (age, marital status, income, hours of work per week, and years in the field). Since my primary interest lies in testing hypotheses, the small effect size in my study would be less important in this study. This regression significant result was consistent with the conclusions of the psychological trauma theory, which indicate that people who see and/or listen

to traumatic materials/narratives tend to exhibit the symptoms of secondary traumatic stress (APA, 2000; Horwitz, 1998). The results, also consistent with the majority of the studies listed in chapter two, show that the amount of exposure helping professionals have to their clients' traumatic material increased the likelihood of these professionals experiencing secondary traumatic stress (Brady et al., 1999; Creamer, 2002; Myers & Cornille, 2002; Pinsley, 2000; Simonds, 1996; Wee & Myers, 2002).

In contrast, the mental health providers (sub-sample of 225) who worked with the traumatized clients of 9/11/01 did not experience an increase in their level of secondary traumatic stress when exposed to different types of traumatized clients. As the second regression research model (see chapter six) suggests, the level of exposure to traumatized clients did not predict the degree of secondary traumatic stress when such demographic variables (age, marital status, income, hours of work per week, and years in the field) and presumed protectors (supervision, peer support, personal support, disaster training before and after 9/11/01) (see Table 10 on page 110) were controlled. Although the level of exposure to traumatized clients marginally predicted the degree of secondary traumatic stress using the Buffering Resource Index (BRI) as the presumed protectors (see Table 11 on page 111), its effect was not large enough to achieve statistical significance at the .05 level.

In fact, these 9/11/01 mental health providers did not experience higher levels of secondary traumatic stress. Being a 9/11/01 mental health provider had no correlation with the degree of that social worker's secondary traumatic stress. This finding is consistent with the ones already shown by Naturale (2009) who analyzed the same data. However, it is not consistent with the results of previous studies which found that greater involvement with assisting the victims of September 11, 2001, resulted in a higher level of secondary traumatic stress (Boscarino, Figley,

and Adams, 2004; Creamer and Liddle, 2005). Based upon the psychological trauma theory (which correlates social workers who identify with their clients' trauma with an increased risk for suffering traumatic effects (Horwitz, 1998)), I assumed that those New York City social workers who assisted the victims of 9/11/01 would have a heightened level of secondary traumatic stress. Since most of the social workers in this study lived in Manhattan, they shared the victimization experience with their clients.

One of the reasons for the discrepancy between this study and previous ones might come from the number of hours the social workers spent with the victims. The 9/11/01 mental health providers in the current sample test spent an average of 30 total hours with victims; this relatively small amount of time might have reduced the social workers' level of secondary traumatic stress. Furthermore, more than half of the social workers did not witness the 9/11/01 event in person, and a majority of the social workers did not experience any major personal loss due to the events of 9/11/01 (see chapter two). Therefore, due to less direct exposure to the event and its victims, the New York City social workers of 9/11/01 might have had an easier recovery from the trauma; they might have also lessened their stress by discussing the terrorist attacks with their colleagues, family members, or friends. Because of the public nature of the 9/11/01 attacks, social workers would have had an easier time finding people to listen to them and support them than in the more private cases of rape, child abuse, or other traumas.

### **7.3.2. Social Workers' Demographics: Age, Years in the Field, Marital Status, Income, and Hours of Direct Contact with Clients**

The bivariate correlation analysis in this study indicated that older social workers reported fewer secondary traumatic stress symptoms than younger social workers. This result reinforces the conclusions of previous studies (Creamer & Liddle, 2005; Ghahramanlou & Brodbeck, 2000;



Nelson-Gardell & Harris, 2003). American Red Cross workers who responded to the victims of 9/11/01 (Lindsay, Gray, Grubaugh, et al, 2006; Simon, Pryce, Roff, & Klemmack, 2005) also showed that the age of the social worker was related to a reduction in secondary traumatic stress. Previous studies (Creamer & Liddle, 2005; Ghahramanlou & Brodbeck, 2000; Nelson-Gardell & Harris, 2003) suggest that older people have had the time to acquire better coping skills to reduce their level of stress symptoms than younger people.

The bivariate correlation analysis in this study found an association between more years in the field after earning an MSW and a lower level of secondary traumatic stress. This study result is consistent with the findings of previous studies (Badger, Royse & Craig, 2008; Chrestman, 1999; Creamer & Liddle, 2005; Good, 1996) that also indicated that those helping professionals with less field practice were more at risk for developing secondary traumatic stress symptoms.

Previous studies (Byrne, 2006; Lindsay, Gray, Grubaugh, et al, 2006) have recognized marital status as playing a protective role against psychological stress and secondary traumatic stress; they have shown that the household status, such as living with others, was a significant protective factor against secondary traumatic stress. However, this study found no correlation between the social workers' marital status and degree of secondary traumatic stress. In addition, this study does not yield a correlation between income or hours of direct contact with clients and the social workers' level of secondary traumatic stress.

Therefore, while the bivariate correlation analysis in this study did not find a relationship between marital status, income, or hours of direct contact with clients and the occurrence of secondary traumatic stress, it did suggest that the age of the social worker and the number of years in the field (professional experience) were related to lower secondary traumatic stress. Older, more experienced social workers, however, also had less exposure to traumatized clients.

In this study sample, then, work conditions, including less direct contact with traumatized populations, may perhaps account for a lower level of secondary traumatic stress symptoms.

#### **7.4. Buffers (Protective Factors) against Secondary Traumatic Stress**

As described in chapter six, among the five potential moderators (supervision, peer support, personal support, disaster training before 9/11/01, and adequate training during 9/11/01), only peer support marginally contributed to buffering the effect of trauma exposure on secondary traumatic stress (although peer support was not directly correlated with the level of secondary traumatic stress). Previous literature (Baird & Jenkins, 2003; Dickes, 1998; Pearlman & MacJan, 1995; Pulido, 2005; Randall, Altmaier & Russell, 1989; Slattery, 2003) has described the effectiveness of peer support in reducing secondary traumatic stress. Social support theory, which posits that social support enriches the individual's physical and psychological well-being, also suggests that peer support acts as a buffer against stress (Germain, 1982).

Contrary to previous literature (Chrestman, 1999; Perrin et al, 2007; Pulido, 2005; Rogentine, 1996) and theories of stress and coping and social support, this study showed no correlation between disaster training before the 9/11/01 event and adequate training during the 9/11/01 event and the social workers' level of secondary traumatic stress. Because these factors did not create buffers between stress and the social workers, they were not found to be protective factors. Similarly, supervision was not a protective factor, a finding that is inconsistent with previous literature (Hodgkinson & Shepard, 1994; Lybeck-Brown, 2002; Naturale, 2007). Previous studies found that more supervision reduced the degree of secondary traumatic stress; in this study, however, supervision was slightly but significantly related to higher secondary traumatic stress symptoms in the bivariate correlations. One interpretation of the results suggests that those social workers exposed to more traumatized clients having more secondary traumatic stress symptoms

might have a great likelihood of receiving supervision.

Furthermore, I conducted a follow-up analysis in the first regression research model (see chapter six) to explore whether or not the predicted effect of trauma exposure might be more pronounced for some demographic characteristics. As a result, the data show significant differences in the betas of the percentage of trauma caseload for age (younger social workers:  $\beta=.13$ ; older social workers:  $\beta=.23$ ) and years of field experience (less experienced social workers:  $\beta=.10$ ; more experienced social workers:  $\beta=.27$ ). Based on the results from the follow-up analysis on the first regression model, therefore, splitting the sample into two groups on a possible moderator (see chapter six) shows that age and years of field experience might qualify as factors in the trauma exposure-secondary traumatic stress relationship. The results of this study seem to suggest that older workers were less exposed to traumatized clients, thereby showing lower secondary traumatic stress overall; when these older workers were exposed to more traumatized clients, they showed increased traumatic stress. Generally, older people might be less resilient compared with younger people (Heisel, 2006); therefore, older social workers might have more difficulty in addressing their secondary traumatic stress symptoms. Also, the bivariate correlation analysis indicated that older social workers tend to receive fewer opportunities of supervision than younger social workers. According to this study, the level of secondary traumatic stress was higher for younger social workers, who had a great deal of exposure to traumatized clients, than for older social workers. However, older social workers who supervise others and receive fewer opportunities of receiving supervision might be more at risk for developing secondary traumatic stress. In addition, including cohabiting workers with those married did not alter the pattern shown in the analysis regarding the potentially moderating effect of marital status (living with a partner).

### 7.5. Limitations of Study

This study has four limitations. First, the study only focuses on New York City social workers. In particular, the sample population reflects older social workers with higher levels of education, higher incomes, and more experience. The New York City social workers in this study were primarily Caucasians living in Manhattan; they had an average age of 60. Not only did most of these social workers have a Master's degree or higher, but they also earned more than the general American population. In addition, most of the New York City social workers had experience as supervisors; therefore, they spent fewer hours of direct contact with clients compared with the average practitioners. The unique characteristics of this study sample make it more challenging to generalize and interpret the current phenomena of the levels and predictors of secondary traumatic stress for all social workers in the United States.

Second, although the study began with a survey population of 481, that number dropped due to some missing responses. Specifically, the study lost numbers in terms of the question items on dependent variables and independent variables: the levels of secondary traumatic stress and exposure to traumatized populations. This loss may have slightly reduced the power for the regression data analysis in this study and may have possibly affected the estimates of the effects.

Third, the study uses weak measures for presumed "protective variables" such as supervision, peer support, personal support, and training before and after the 9/11/01 event. For this study analysis, the presumed protective variables have been measured as a "yes or no" answer item. By not including "good" or "adequate" options, the study does not convey whether or not the New York City social workers received an effective degree of workplace support and training. The study assumes, however, that social workers need quality workplace support and training, not minimal workplace work and training, in order to reduce their secondary traumatic stress

symptoms.

Fourth, the study does not measure the presumed protective factors in relation to how much exposure the social workers had to victims of different kinds of trauma. This could partially explain why these protective factors had non-buffering effects on secondary traumatic stress. The survey questionnaire measured supervision and other presumed protective factors (such as peer support, personal support, and training before and after the 9/11/01 event) only in relation to the social workers' exposure to the 9/11/01 victims, not to the social workers' exposure to victims of different kinds of trauma. Therefore, the protective factors that played a role in the social workers' exposure to the 9/11/01 victims and the occurrence of secondary traumatic stress might not have a significant effect on those social workers exposed to a variety of trauma victims. Further research is needed to measure those presumed protective factors and to determine whether or not they buffer the level of secondary traumatic stress for social workers dealing with a diversity of trauma cases and victims.

## **7.6. Implications Based on Study Results**

### **7.6.1. Need of Rotation System**

The current study indicates that social workers who generally worked with a higher percentage of different types of traumatized clients (such as traumatized victims of childhood sexual abuse, rape, or domestic violence), not only with the traumatized victims of 9/11/01, experienced higher levels of secondary traumatic stress. In particular, a social worker's percentage of caseload with all forms of traumatized clients strongly predicted that social worker's level of secondary traumatic stress. This recommendation for more preventive measures would apply to social workers nationwide, not just those in New York City. One such preventive measure involves administrators more carefully monitoring each social worker's

caseload and then rotating social workers out of particularly tough assignments to reduce the degree of exposure to traumatized clients and severe cases.

### **7.6.2. Need of Peer Support Group**

The majority of the New York City social workers in this study received peer support from colleagues during their work in the 9/11/01 event. The current study finds that peer support marginally buffered the level of secondary traumatic stress experienced by the social workers assisting the 9/11/01 victims in New York City. Because of this finding, peer support might be the most accessible way of reducing secondary traumatic stress for the 9/11/01 mental health providers. The survey in this study did not include any question item that asked social workers whether or not peer support might buffer their level of secondary traumatic stress caused by assisting different types of traumatized clients. However, given that peer support marginally buffered the level of secondary traumatic stress for the 9/11/01 mental health providers, it can be assumed that peer support might also act as a buffer for reducing the level of secondary traumatic stress by those social workers meeting with different type of traumatized clients. As mentioned in chapter two, Valent (1995) suggested that social workers needed to process the experiences of secondary traumatic stress through treatment teams, consultations with colleagues, and debriefing meetings in order to effectively integrate these experiences. Therefore, this study suggests that peer support might be effective in reducing the level of secondary traumatic stress for social workers exposed to traumatized clients. Administrators in those organizations that assist traumatized populations can initiate a conversation among social workers that focuses on the stress caused by trauma work.

### **7.6.3. What Administrators Can Do?**

Dershimer (1990) recognized employer support as a critical factor for helping professionals

working with traumatized populations; similarly, there is a crucial need for administrative support for social workers assisting traumatized populations. Administrators in organizations assisting traumatized populations can monitor every social worker to ensure that she/he receives adequate levels of workplace support. For instance, administrators can suggest that supervisors test their supervisees' level of secondary traumatic stress and then discuss with these social workers the definition of secondary traumatic stress, their personal trauma related to their clients' experiences, or their work trauma.

### ***Setting up Formal Peer Support Groups***

In the current study, peer support might have played a positive role in maintaining the mental health of the social workers. Administrators in those organizations that assist traumatized populations can not only create formal peer support groups or treatment teams, but they can also coordinate debriefing meetings so that social workers have the opportunity to discuss their stress caused by trauma work with their peers inside the organization. At the same time, the administrators should manage the organization so that peers work in a caring, tension-free environment. According to the social support theory mentioned in chapter two, network support (the individual feeling a part of a group whose members share the same interests and concerns) is necessary for buffering the individual's stress (Cutrona & Russell, 1990; Lind, 2000). By providing their social workers with this type of network support, administrators would help their social workers deal more effectively with their secondary traumatic stress. In practice, this type of network support, including more casual friendships, tends to be created through social and recreational activities. The administrators, for instance, could sponsor some organizational events such as group lunches or theatre parties.

As mentioned in chapter three, the National Association of Social Workers (NASW), in the

section on *Professional Impairment*, issued a Policy Statement that deals with work impairment and that on social workers (NASW, 2006). In this document, the NASW suggests that “individual and group support should be available for social work practitioners as a means to discuss job site and work stressors that may lead to the physical and psychological problems often found among those employed in social work settings.” The NASW policy also suggests creating colleague-assistance confidential programs that identify colleagues with some form of impairment and advise those individuals about how to obtain appropriate treatment (NASW, 2006). Furthermore, in the area of *Disasters*, the NASW Policy Statement (2003, 2006) advocates “giving attention to the special and critical training, stress management, and support needs of disaster workers in all capacities, from administrative to field staff, and the need to respond to their circumstances as victims and survivors.” The NASW should stress these current policy statements toward social workers nationwide via the internet, publications, and NASW national conferences and meetings. In addition, the NASW should define the work stress social workers get from meeting with traumatized clients and should endorse the establishment of colleague-assistance programs or stress management teams. It is the job of the NASW to make those administrators who assist social workers dealing with traumatized populations more aware of the significance of secondary traumatic stress issues.

### ***Setting up Supervisory Services for Social Workers in Any Positions***

The current study finds no evidence that supervision was effective in reducing the level of secondary traumatic stress experienced by the New York City social workers involved in the 9/11/01 event. On the contrary, the bivariate correlation result indicated that more supervision was related to a higher level of secondary traumatic stress, although this minimal relationship was even less and not significant in the multivariate analysis. This result contradicts the findings



in the majority of the previous literature on secondary traumatic stress that assert a correlation between a higher degree of supervision and a lower level of secondary traumatic stress for helping professionals (Creamer and Liddle, 2005; Hodgkinson and Shepard, 1994; Lybeck-Brown, 2002; Naturale, 2007; Slattery, 2003). Several factors may explain why the current study shows that more supervision was related to more secondary traumatic stress.

The bivariate correlation results in the study recognize that the majority of the New York City social workers received personal support from family members and/or friends and peer support from colleagues during the 9/11/01 event. The social workers might have received inadequate supervisory support and relied more on the support from family members, friends, or peers. Also, the current study indicates that more than half of the New York City social workers did not discuss their 9/11/01 reactions with their supervisors. As previously stated, almost half of the social workers in this study did not receive supervision, most likely due to the fact that most of the social workers in this study sample held supervisory positions. Yet, even those administrative social workers, who were presumably older and more experienced social workers, still needed supervisory support since they also met with traumatized clients or heard traumatic stories through their supervisees. In addition, older social workers might have less resilience in dealing with their stress compared with younger social workers (Heisel, 2008). In fact, the current study has indicated that older and more experienced social workers exposed to a greater number of trauma clients were at risk for higher levels of secondary traumatic stress, whereas those social workers in this study sample had lower levels of secondary traumatic stress due to less exposure to traumatized clients.

The most important finding of this study shows that the bivariate correlation results indicate that age has a negative correlation to both supervision and secondary traumatic stress, while the

number of trauma case types has a positive correlation to both supervision and secondary traumatic stress. Therefore, controlling age and trauma exposure, including the number of trauma case types, might cause a non-significant positive co-relationship between supervision and secondary traumatic stress.

Based upon the previous literature that supports the effectiveness of supervision and based upon the results of the current study that question both the effectiveness of supervision and the significant positive relationships between supervision and secondary traumatic stress, it would be important for administrators to establish supervisory services for social workers in any position. In this way, social workers will have the opportunity to discuss their trauma work and/or their trauma stemming from the experiences of their clients with their supervisors.

### ***Setting up Training for Trauma Work***

This current study finds that only a few social workers had disaster-specific training before the 9/11/01 event. Also, more than half of the social workers did not receive adequate training for the job during their work with the 9/11/01 event and its aftermath. According to this study, disaster training (either before and/or after the 9/11/01 event) was not a buffer that protected the New York City social workers from developing secondary traumatic stress. However, according to previous studies (Bennett et al., 1996; Chrestman, 1999; Ewalt, 1991; Frazer & Sechrist, 1994; Haviland et al., 1997; Perrin et al, 2007), training generally leads to better mental health outcomes for social workers. Perhaps the New York City social workers in this study did not benefit from disaster training due to the shoddy quality of the training they received. As a result, even those social workers with training would not experience a reduction in their symptoms of secondary traumatic stress.

The previous literature findings have suggested that training might be a protective factor of

stress. Therefore, it would be beneficial for those administrators supporting traumatized populations to develop adequate levels of training on how to work with these populations. However, the current study results indicate that training did not buffer the level of secondary traumatic stress for the 9/11/01 mental health providers exposed to traumatized clients. One explanation for this finding stems from the fact that the majority of these social workers did not receive adequate training for dealing with traumatized populations. For training to serve as a buffer, it needs to be well-organized and rooted in trauma theory and practices. Therefore, it could be suggested that administrators in organizations assisting traumatized populations should institute in-service training sessions that teach social workers the skills needed to treat secondary traumatic stress. In its section on *Disasters*, the NASW Policy Statement (2003, 2006) recommends “educating social workers in the specialized knowledge and methods of trauma response and critical incident stress debriefing” (NASW, 2003, 2006, p 83). Because the NASW Policy Statement does not specifically mention secondary traumatic stress, the NASW could be encouraged to add this specific term to any discussion on the relationship between disaster events and social workers.

As mentioned in the third chapter, the federal Occupational Safety and Health Act (OSH Act) has also insisted that all employers must furnish their employees with a workplace that is free from recognized hazards and stress (U.S. General Services Administration, 2008). The Occupational Safety and Health Administration (OSHA) developed the Guidelines for Preventing Workplace Violence for Health Care and Social Service Workers (OSHA, 2004). Similar to its workplace violence guidelines, OSHA could make an effort to reduce secondary traumatic stress symptoms for healthcare and social service workers by preparing a mandatory guide that includes such preventive measures as supervision, peer support groups, and training;

OSHA could distribute this guideline to administrators in organizations that assist traumatized clients.

The third chapter of this study also refers to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the Stafford Act), a federal law that offers disaster assistance to aid citizens. Section 416, titled “Crisis Counseling, Assistance, and Training,” authorizes the President to financially assist state or local agencies, as well as private mental health organizations, in providing counseling and support to disaster workers in order to relieve mental health problems caused or aggravated by disasters or their aftermath (FEMA, 2007; Office of the Federal Register National Archives and Records Administration, 2008; U.S. General Services Administration, 2008).

Therefore, administrators in those organizations that assist traumatized populations such as disaster victims have a legal and moral obligation to provide workplace support and disaster training to their social workers. These administrators and organizations would need to implement uniform standards on measuring the quality of supervision, on determining the effectiveness of official support groups, and on assessing the benefits of in-service training; furthermore, federal and professional policies are needed to evaluate these programs and to ensure that they are properly administered.

#### **7.6.4. What Schools of Social Work Can Do?**

Social work education plays a critical role in preparing students for assisting traumatized populations and in teaching these students how to protect themselves from secondary traumatic stress. Currently, both the BSW and MSW programs in most schools of social work educate students on trauma and PTSD; however, these programs also need to include classes on indirect trauma and secondary traumatic stress. For instance, foundation courses could introduce the

concept of secondary trauma through such required classes as Direct Social Work Practice or Human Behavior and Social Environments. Also, field directors and/or advisors could organize field education seminars in which they discuss secondary trauma with their students.

As mentioned in chapter three, the NASW, through its Policy Statement in the section on *Professional Impairment* (NASW 2006), suggests that “social work education programs should incorporate material about student and professional impairment, and ethical responsibilities related to impairment, into their coursework.” The issues of secondary traumatic stress symptoms should be considered as one type of professional impairment since secondary traumatic stress could lead to turnover in the workplace (Baird & Jenkins, 2003; Beaton & Murphy, 1995; Harris, 1995). However, the fact that the NASW Policy Statement does not include the specific term of secondary traumatic stress might lessen the urgency of social work schools to address this problem. Therefore, not only should the NASW Policy Statement specifically refer to secondary traumatic stress, but the Council on Social Work Education should also add secondary traumatic stress to its publications and/or presentations.

## **7.7. Conclusions and Recommendations for Future Research**

### **7.7.1. Contribution Areas of Research**

Because previous studies have focused on secondary traumatic stress in a diversity of professional caregivers (social workers, psychologists, psychiatrists, nurses, therapists, counselors, etc.), I chose to do secondary analyses of data which focused on the secondary traumatic stress experienced by social workers trained in a school of social work. Furthermore, because past studies have not explored the long-term psychological effects of trauma work in disaster workers, the data in my study cover a nine-year-range, beginning with the event of 9/11/01 and its effect on social workers and continuing to the present.

I expanded the primary independent variable of exposure to traumatized populations to include not only the social workers' level of exposure to 9/11/01 victims but also their level of exposure to different types of trauma clients; such an approach is unique to this study. As a result of the regression analysis on secondary traumatic stress and the level of general trauma clients, my analysis showed that a greater exposure to general traumatized populations increased the levels of secondary traumatic stress for social workers in New York City (sub-sample of 373). This is a significant finding because it indicates that social workers tend to develop their levels of secondary traumatic stress from consistently working with many kinds of trauma (sexual assault, child abuse and neglect, domestic violence, elder abuse, etc.) and victims over a period of time, not from responding to such extraordinary events as the attacks of 9/11/01.

#### **7.7.2. Recommendations for Future Research**

The next logical step for a study on secondary traumatic stress would be to expand my research to the national level and to involve social workers from across the field. As I mentioned in the previous section (7.1.2.), my study sample only included social workers from the Manhattan Chapter of the NASW; these social workers had unique characteristics compared with the average social workers. Also, my study primarily focuses on examining the level of secondary traumatic stress for disaster social workers who have more exposure to victims of a man-made disaster. By expanding the sample to include all social workers across the field and their levels of secondary traumatic stress, future research will perhaps shed insight on the more generalized conditions of the social workers' level of secondary traumatic stress symptoms and the predictive factors needed to reduce and/or prevent this stress. Furthermore, the current study has indicated that age and years of field experience might qualify the effect of exposure on the level of secondary traumatic stress; however, since the study sample were older and more

experienced than the average social workers, it is valuable to explore whether age and years of field experience would also be a risk factor of secondary traumatic stress for all social workers exposed to traumatized populations.

In addition, a future secondary traumatic stress study should include questions to measure presumed predictive factors (workplace support and training) in relation to exposure to different kinds of traumatized clients since the measurements for the protective factors in the current study included only exposure to the 9/11/01 victims. A future study could yield non-significant results to determine whether workplace support and training were protective factors.

Finally, a study of national samples of social workers may examine which traumatic cases increase the levels of secondary traumatic stress and which social workers are most vulnerable to experiencing greater levels of secondary traumatic stress. As mentioned in chapter two, some researchers have found that workers who treat victims of human-induced violence and crime, such as sexual assault or domestic violence, experience more severe secondary trauma than those workers who treat victims of naturally occurring traumas, such as cancer or environmental disasters (Cunningham, 2003; Kassam-Adams, 1995). Some researchers (Creamer, 2002; Good, 1996) have discovered that helping professionals who treat children exhibit higher levels of secondary traumatic stress than those social workers who treat adults. Based on the previous study findings, social workers across the field could be surveyed. Then, a comparison between the levels of secondary traumatic stress within social workers assisting victims of human-induced violence and crime with the levels of secondary traumatic stress within social workers assisting victims of naturally occurring trauma could be made. The differences between working with traumatized children and working with traumatized adults could also be compared to better understand the development of secondary traumatic stress within social workers. The results

might be significant enough to play a role in the creation of national preventive measures against secondary traumatic stress specific to each field.

As mentioned in chapter three, the NASW policies, the OSH Act, and Section 416 of the Stafford Act do not describe the workforce issues of occupational stress or secondary trauma for helping professionals. The limited amount of national large-scale research on secondary traumatic stress for social workers may cause this omission. Any empirical evidence garnered from a national large-scale research study would result in better definitions of the terminologies associated with secondary traumatic stress for social workers. Therefore, conducting a national large-scale empirical study on secondary traumatic stress for social workers might lead to the development of policies that protect the well-being of social workers in the workplace.

To organize a national study on secondary traumatic stress, the directory from the NASW would first be purchased in order to conduct a random sampling. Then, my survey on secondary traumatic stress could be expanded to include national samples of more general social workers in a diversity of fields.

Furthermore, a qualitative study on secondary traumatic stress would be used to explore the quality of presumed protective variables (supervision, peer support, and training) since the current study, with its quantitative survey approach, does not clarify the following questions: 1) Why did the majority of the social workers not receive supervision and/or training? and 2) Why was peer support the only beneficial buffering factor? Interviews with social workers will indicate how social workers receive supervision and training and why these factors have not played significant roles in reducing the social workers' levels of secondary traumatic stress. Which kinds of peer support may help reduce secondary traumatic stress symptoms might also be examined. Based on the current study that correlates a higher degree of trauma exposure with



an increased level of secondary traumatic stress for social workers, qualitative interview research would result in a better understanding of how trauma exposure produces greater levels of secondary traumatic stress for social workers.

### **7.7.3. Conclusion**

The current study primarily shows that the amount of exposure to traumatized clients increases the level of secondary traumatic stress for social workers who responded to different types of trauma and that the degree of peer support served as a protective factor that lowered or eliminated the level of secondary traumatic stress for the 9/11/01 mental health providers. Since society focuses more on assisting victims of *direct* trauma, little attention has been given to the *indirect* trauma endured by social workers. Therefore, social workers might be the hidden victims of society (Stewart & Hodgkinson, 1994). However, the federal Occupational Safety and Health Act (OSH Act) of 1970 helps prevent the occurrence of occupational hazards and stress for every American worker (U.S. General Services Administration, 2008). Based upon this Act, social workers have the right to work in a safe and healthy environment that contributes to their general well-being. To comply with the OSH Act, all employers must furnish their employees with a workplace that is free from recognized hazards that can cause either serious physical harm or death to employees. In those organizations that assist traumatized populations, administrators and supervisors must take care of their workers by creating supportive networks inside the workplace. Schools of social work also have the responsibility of educating social work students about secondary traumatic stress to help these students better prepare for their future work as professional social workers. Achieving a more positive working environment for social workers requires a national large-scale empirical study on secondary traumatic stress. Such a study should make the issue of secondary traumatic stress an integral part of federal policy, agency policies,

and educational policies (such as CSWE policies) in order to improve the work conditions of social workers.

Assisting traumatized populations is not easy. When interacting with traumatized clients, social workers often relive their own past traumatic events and, therefore, face the risk of developing secondary traumatic stress symptoms. To succeed in their profession, then, social workers need to recognize their strengths and limitations both as helping professionals and as human beings. They need to have a strong educational background, knowledge both of theory and practice, essential skills, and social support. The more awareness social workers have of their own traumatic life issues, the more effective they will be in communicating with and assisting a diversity of traumatized individuals.

## **Appendix A**

### **The Post 9/11/01 Quality of Professional Practice Survey (PQPPS)**



**Post 9/11/01 Quality of Professional Practice Survey (PQPPS)**

1. Please indicate how much you agree with the following statements as they apply to you over the last month. If a particular situation has not occurred recently, answer according to how you think you would have felt.

	Not true at all	Rarely True	Sometimes True	Often True	True nearly all the time
a. I am able to adapt when changes occur.					
b. I have at least one close and secure relationship which helps me when I am stressed.					
c. When there are no clear solutions to my problems, sometimes fate or God can help.					
d. I can deal with whatever comes my way.					
e. Past successes give me confidence in dealing with new challenges and difficulties.					
f. I try to see the humorous side of things when I am faced with problems.					
g. Having to cope with stress can make me stronger.					
h. I tend to bounce back after illness, injury, or other hardships.					
i. Good or bad, I believe that most things happen for a reason.					
j. I give my best effort, no matter what the outcome may be.					
k. I believe I can achieve my goals, even if there are obstacles.					
l. Even when things look hopeless, I don't give up.					
m. During times of stress/crisis, I know where to turn for help.					
n. Under pressure, I stay focused and think clearly.					
o. I prefer to take the lead in solving problems, rather than letting others make all the decisions.					
p. I am not easily discouraged by failure.					
q. I think of myself as a strong person when dealing with life's challenges and difficulties.					
r. I can make unpopular or difficult decisions that affect other people, if it is necessary.					
s. I am able to handle unpleasant or painful feelings like sadness, fear, and anger.					
t. In dealing with life's problems, sometimes you have to act on a hunch, without knowing why.					
u. I have a strong sense of purpose in life.					
v. I feel in control of my life.					
w. I like challenges.					
x. I work to attain my goals, no matter what roadblocks I encounter along the way.					
y. I take pride in my achievements.					

## Secondary Traumatic Stress

Helping people puts you in direct contact with their lives. As you probably have experienced, your compassion for those you help has both positive and negative aspects. We would like to ask you questions about your experiences, both positive and negative, as a helper.

**2. Consider each of the following questions about you and your current situation. Write in the number that honestly reflects how often the statement has been true for you in the last 30 days.**

**0=Never 1=Rarely 2=A Few Times 3=Somewhat Often 4=Often 5=Very Often**

- a. I am preoccupied with more than one person I help. \_\_\_\_\_
- b. I get satisfaction from being able to help people. \_\_\_\_\_
- c. I jump or am startled by unexpected sounds. \_\_\_\_\_
- d. I have more energy after working with those I help. \_\_\_\_\_
- e. I find it difficult to separate my personal life from my life as a helper. \_\_\_\_\_
- f. I think that I might have been "infected" by the traumatic stress of those I help. \_\_\_\_\_
- g. Because of my helping, I have felt "on edge" about various things. \_\_\_\_\_
- h. I like my work as a helper. \_\_\_\_\_
- i. I feel depressed as a result of my work as a helper. \_\_\_\_\_
- j. I feel as though I am experiencing the trauma of someone I have helped. \_\_\_\_\_
- k. I am pleased with how I am able to keep up with helping techniques and protocols. \_\_\_\_\_
- l. My work makes me feel satisfied. \_\_\_\_\_
- m. I have happy thoughts and feelings about those I help and how I could help them. \_\_\_\_\_
- n. I believe I can make a difference through my work. \_\_\_\_\_
- o. I avoid certain activities or situations because they remind me of frightening experiences of the people I help. \_\_\_\_\_
- p. I am proud of what I can do to help. \_\_\_\_\_
- q. As a result of my helping, I have intrusive, frightening thoughts. \_\_\_\_\_
- r. I have thoughts that I am a "success" as a helper. \_\_\_\_\_
- s. I can't remember important parts of my work with trauma victims. \_\_\_\_\_
- t. I am happy that I chose to do this work. \_\_\_\_\_

**3. The statements below concern how you typically feel in *emotionally intimate* relationships *in general*. Keep in mind that there are no right or wrong answers. Respond to each statement by checking the box to indicate how much you agree or disagree with each statement.**

	Strongly Disagree 1	2	3	4	5	6	Strongly Agree 7
a. I find it relatively easy to get close to others.							
b. I'm not very comfortable having to depend on other people.							
c. I'm comfortable having others depend on me.							
d. I rarely worry about being abandoned by others.							
e. I don't like people getting too close to me.							
f. I'm somewhat uncomfortable being too close to others.							
g. I find it difficult to trust others completely.							
h. I'm nervous whenever anyone gets too close to me.							

		Strongly Disagree						Strongly Agree
		1	2	3	4	5	6	7
i.	Others often want me to be more intimate than I feel comfortable being.							
j.	Others often are reluctant to get as close as I would like.							
k.	I often worry that my partner(s) don't really love me.							
l.	I rarely worry about my partner(s) leaving me.							
m.	I often want to merge completely with others, and this desire sometimes scares them away.							
n.	I'm confident others would never hurt me by suddenly ending our relationship.							
o.	I usually want more closeness and intimacy than others do.							
p.	The thought of being left by others rarely enters my mind.							
q.	I'm confident that my partner(s) love me just as much as I love them.							

4. Listed below are a number of difficult or stressful things that sometimes happen to people. For each event, check a box to the right to indicate that: (a) it *happened to you* personally, (b) you *witnessed it* happen to someone else, (c) you *learned about it* happening to someone close to you, (d) you're *not sure* if it applies to you, or (e) it *doesn't apply* to you.

Mark *only one* box next to each stressful event. If more than one box fits an event, choose the one that fits best.

Be sure to consider your *entire life* (growing up, as well as adulthood) as you go through the list of events.

Event	Happened To me	Witnessed it	Learned about it	Not Sure	Doesn't Apply
a. Natural disaster (for example, flood, hurricane, tornado, earthquake)					
b. Fire or explosion					
c. Transportation accident (for example, car accident, boat accident, train wreck, plane crash)					
d. Serious accident at work, home, or during recreational activity					
e. Exposure to toxic substance (for example, dangerous chemicals, radiation)					
f. Physical assault (for example, being attacked, hit, slapped, kicked, beaten up)					
g. Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb)					
h. Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)					
i. Other unwanted or uncomfortable sexual experience					
j. Combat or exposure to a war-zone (in military or as a civilian)					
k. Captivity (for example, being kidnapped, abducted, held hostage, prisoner of war)					
l. Life-threatening illness or injury					
m. Severe human suffering					
n. Sudden, violent death (for example, homicide, suicide)	N/A				

## Secondary Traumatic Stress

Event	Happened To me	Witnessed it	Learned about it	Not Sure	Doesn't Apply
o. Sudden, unexpected death of someone close to you					
p. Serious injury, harm, or death you caused to someone else	(Check here if you were directly involved)				
q. Any other stressful event or experience					

5. Have you ever been in psychotherapy?  Yes  No

6. If Yes, have you ever talked about any of these events in psychotherapy?  Yes  No

7. Below is a list of problems and complaints that people sometimes have in response to stressful experiences. Please read each one carefully, put an X in the box to indicate how much you have been bothered by that problem in the past month.

	Not at all	A little bit	Moderately	Quite a bit	Extremely
a. Repeated, disturbing <i>memories, thoughts, or images</i> of a stressful experience?					
b. Repeated, disturbing <i>dreams</i> of a stressful experience?					
c. Suddenly <i>acting or feeling</i> as if a stressful experience were <i>happening again</i> (as if you were reliving it)?					
d. Feeling <i>very upset</i> when <i>something reminded you</i> of a stressful experience?					
e. Having <i>physical reactions</i> (e.g., heart pounding, trouble breathing, sweating) when <i>something reminded you</i> of a stressful experience?					
f. Avoiding <i>thinking about or talking about</i> a stressful experience or avoiding <i>having feelings</i> related to it?					
g. Avoiding <i>activities or situations</i> because they remind you of a stressful experience?					
h. Trouble <i>remembering important parts</i> of a stressful experience?					
i. <i>Loss of interest</i> in activities that you used to enjoy?					
j. Feeling <i>distant or cut off</i> from other people?					
k. Feeling <i>emotionally numb</i> or being unable to have loving feelings for those close to you?					
l. Feeling as if your <i>future</i> will somehow be <i>cut short</i> ?					
m. Trouble <i>falling or staying asleep</i> ?					
n. Feeling <i>irritable</i> or having <i>angry outbursts</i> ?					
o. Having <i>difficulty concentrating</i> ?					
p. Being " <i>super-alert</i> " or watchful or on guard?					
q. Feeling <i>jumpy</i> or easily startled?					

**Demographics**

8. Gender: 1  Female 2  Male

9. Age: \_\_\_\_\_

10. Which of the following best describes you?

- 1  Asian or Pacific Islander                      4  Hispanic or Latino  
 2  African American/Black (non-Hispanic)    5  American Indian or Alaskan Native  
 3  White (non-Hispanic)                              6  Mixed Race (specify) \_\_\_\_\_  
 7  Other (specify) \_\_\_\_\_

11. Marital Status (please check one):

- 1  Never Married  
 2  Married  
 3  Separated  
 4  Divorced  
 5  Widowed

12. Living arrangements (please check one):

- 1  In a relationship, living apart  
 2  Cohabiting with a partner/spouse  
 3  Live with other(s) who are not family members  
 4  Live with family member (not partner/spouse)  
 5  Live alone

13. Religious Affiliation

- 1  Catholic                      4  Muslim                      7  Buddhist  
 2  Protestant                      5  None                      8  Atheist  
 3  Christian                      6  Jewish                      9  Other (please specify) \_\_\_\_\_

14. Gross Annual Income

- 1  <\$19,999    2  \$20,000-\$39,999    3  \$40,000-\$59,999    4  \$60,000-\$79,999  
 5  \$80,000-\$99,999    6  \$100,000 or more

15. Borough of current residence:

- 1  Manhattan    2  Bronx    3  Brooklyn    4  Queens    5  Staten Island

16. Are you a provider for the Red Cross or the 9/11/01 Mental Health and Substance Abuse Program?

- 1  Yes    2  No

a. If Yes, about how long have you been a provider: \_\_\_\_\_ Years    \_\_\_\_\_ Months



The following section pertains to your direct practice and educational experience.

Please answer the following questions regarding your current direct practice experience:

17. Years of Education (check the highest):

- Completed Master's Degree
- Some Doctoral Courses
- Completed Doctoral Degree

18. Highest degree attained

- MSW
- MS/MA
- PhD/DSW
- Other Degree: \_\_\_\_\_

19. How many years have you worked in the field post MSW? \_\_\_\_\_ years

20. Have you had any institute training?  Yes  No

a. If Yes, how many years of institute training? \_\_\_\_\_ years Please specify type \_\_\_\_\_

21. Approximately how many hours do you spend each week in direct practice with clients

\_\_\_\_\_ hours per week

22. Your average hours per week of work in:

\_\_\_\_\_ agency practice \_\_\_\_\_ private practice as a solo practitioner

23. Please check all trauma-related areas or client populations you currently work with:

- a. \_\_\_\_\_ Adult Survivors of Childhood Sexual Abuse
- b. \_\_\_\_\_ Child Sexual Abuse
- c. \_\_\_\_\_ Domestic/Partner Violence
- d. \_\_\_\_\_ September 11th victims, workers, family members, and/or witnesses
- e. \_\_\_\_\_ Survivors of Natural Disasters
- f. \_\_\_\_\_ Rape Survivors
- g. \_\_\_\_\_ Adult Physical Assault Survivors
- h. \_\_\_\_\_ Child Physical Assault Survivors
- i. \_\_\_\_\_ Substance Abusers
- j. \_\_\_\_\_ Eating Disorders
- k. \_\_\_\_\_ Multiple Traumas
- l. \_\_\_\_\_ Elder Abuse
- m. \_\_\_\_\_ Holocaust survivors
- n. \_\_\_\_\_ Accident Victims
- o. \_\_\_\_\_ Neglect (please specify)
- p. \_\_\_\_\_ Other trauma survivors (please specify) \_\_\_\_\_

24. About what percentage of your time per week is with clients addressing trauma? \_\_\_\_\_ %

**25. Your primary theoretical orientation (Check One):**

- 1 \_\_\_\_\_ Psychoanalytic/psychodynamic
- 2 \_\_\_\_\_ Cognitive-behavioral
- 3 \_\_\_\_\_ Integrative/Eclectic (please identify) \_\_\_\_\_
- 4 \_\_\_\_\_ Family Systems
- 5 \_\_\_\_\_ Systems (general)
- 6 \_\_\_\_\_ Other (please write in orientation) \_\_\_\_\_

**26. Have you received any clinical supervision since receiving your MSW? 1  Yes 2  No**

a. If Yes, what are the number of years that you have received clinical supervision/consultation post MSW?

\_\_\_\_\_ years

**27. Are you currently in supervision/consultation? 1  Yes 2  No**

If Yes, check all that apply:

a. 1  Individual 2  Group 3  Peer Group

b. Hours per week currently spent in each supervisory experience:

1 \_\_\_\_\_ Individual 2 \_\_\_\_\_ Group 3 \_\_\_\_\_ Peer Group

**28. Do you supervise others?**

1  Yes 2  No

a. If Yes, are you a clinical supervisor for any of the following (check all that apply)?

1  MSW students 2  MSW/PhD graduates 3  Analytic training candidates

4  others (please specify) \_\_\_\_\_

**29. How many hours per week do you provide supervision?**

\_\_\_\_\_ Hours Per Week

**30. How many hours of your supervisory time per week is spent working with supervisees who deal with trauma-related material?**

\_\_\_\_\_ Hours Per Week

**If you were involved in the mental health response to the 9/11/01 event, either as a volunteer or through your work, please answer the following questions. If not, please skip to question 36**

**31. At the time of the 9/11/01 event, did you provide volunteer or paid mental health services? 1  Yes 2  No**

a. If Yes, how many total hours did you work on 9/11/01 related events? \_\_\_\_\_ Hours

32. Prior to the 9/11/01 event, did you have any disaster-specific training?

1  Yes      2  No

a. If Yes, how many total hours? \_\_\_\_\_ Hours

33. During your work with the 9/11/01 event did you, at the time, receive adequate training for the job?

1  Yes      2  No      3  Not sure

34. During your work in the 9/11/01 event, did you receive supervision?

1  Yes      2  No

If Yes,

a. Please note approximately the total number of hours of supervision you received in each of the modalities during your work with the 09/11/01 event.

1 \_\_\_\_\_ # of hours of individual supervision

2 \_\_\_\_\_ # of hours of group supervision

3 \_\_\_\_\_ # of hours of peer group supervision.

b. Do you feel that you had adequate:

Individual supervision? 1  Yes      2  No      3  Not sure      4  N/A

Group supervision? 1  Yes      2  No      3  Not sure      4  N/A

Peer group supervision? 1  Yes      2  No      3  Not sure      4  N/A

35. During your work with the 9/11/01 event, did you receive:

a. Peer support from colleagues (e.g. others understood the work you were doing and offered understanding/listening)

1  Yes      2  No

b. Personal support (e.g. family members, friends)

1  Yes      2  No

The following questions are about your personal experience in individual psychotherapy or psychoanalysis

36. Are you currently in individual treatment? 1  Yes      2  No

37. Did you obtain individual treatment specific to the events of 9/11/01? 1  Yes      2  No

38. Indicate the total amount of time you have been in individual treatment to date (including both current and all previous treatment).

\_\_\_\_\_ Years      \_\_\_\_\_ Months

39. Are you currently in group treatment? 1  Yes      2  No

40. Did you obtain group treatment specific to the events of 9/11/01? 1  Yes      2  No

41. Indicate the total amount of time you have been in group treatment to date (including both current and all previous treatment).

\_\_\_\_\_ Years      \_\_\_\_\_ Months

The following questions are about your experience with the 9/11/01 event.

42. If you were to guess, how likely is it that an event similar to 9/11/01 will occur in the U.S. in the next two years?  
(Circle One)

Highly Likely		Somewhat Likely		Not Too Likely		Not at All Likely
1	2	3	4	5	6	7

43. In regards to the event of 9/11/01, how much does it currently affect you?

Very Much		Somewhat		A Little		Not at All
1	2	3	4	5	6	7

44. Did you witness (see firsthand) the 9/11/01 event in person (not on television)?

1  Yes    2  No

a. If Yes, about how many blocks or miles away were you when you witnessed the event? If you were very close, please estimate the number of blocks, else the number of miles:

\_\_\_\_\_ Blocks or \_\_\_\_\_ Miles

45. Did you experience any major loss due to the events of September 11, 2001?    1  Yes    2  No

46. Did you discuss your reaction to the 9/11/01 event with any of your clients?    1  Yes    2  No

47. If you provide(d) supervision to others, did you discuss your reaction to the 9/11/01 event with any of your supervisees?

1  Yes    2  No    3  N/A (Did not provide supervision)

48. If you were or currently are in supervision as a supervisee, did you ever discuss your 9/11/01 reaction with your supervisor?

1  Yes    2  No    3  N/A (Not in supervision)

49. Has your approach to providing therapy or direct practice changed since September 11, 2001?

1  Yes    2  No    3  N/A (Not providing therapy or in direct practice)

a. If Yes, was the change due directly to the events of 9/11/01?

1  Yes    2  No

50. Has your approach to providing supervision changed since September 11, 2001?

1  Yes    2  No    3  N/A (Do not provide supervision)

51. Have other aspects of your life changed due to the events of September 11, 2001?

1  Yes    2  No



## References

- Adams, R.E., Boscarino, J.A., & Figley, C.R. (2006). Compassion fatigue and psychological distress among social workers: A validation study. *American Journal of Orthopsychiatry*, 76, 103-108.
- Adams, R.E., Boscarino, J.A., & Figley, C.R. (2008). The compassion fatigue scale: Its use with social workers following urban disaster. *Research on Social Work Practice*, 18(3), 238-250.
- Aguilera, D. C. (1995). *Crisis intervention: Theory and methodology*. St. Louis, MO: Mosby.
- Akin, J. and J. Grissett (2007). Social Work Reinvestment. *NASW Alabama Network Newsletter* 24(4), 6.
- American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders: DSM-IV-TR (4<sup>th</sup> ed, text revision). Washington, DC: Author.
- American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders: DSM-IV (4th ed). Washington, DC: Author.
- American Psychiatric Association. (1987). Diagnostic and statistical manual of mental disorders: DSM-III-R (3rd ed, text revision). Washington, DC: Author.
- American Psychiatric Association. (1980). Diagnostic and statistical manual of mental disorders: DSM-III (3rd ed). Washington, DC: Author.
- American Psychiatric Association. (1968). Diagnostic and statistical manual of mental disorders: DSM-II (2<sup>nd</sup> ed). Washington, DC: Author.
- American Psychiatric Association. (1952). Diagnostic and statistical manual of mental disorders: DSM-I (1<sup>st</sup> ed). Washington, DC: Author.
- Arnetz, J.E. & Arnetz, B.B. (2001). Violence towards health care staff and possible effects on the quality of patient care. *Social Science and Medicine*, 52, 417-427.
- Archibald, H. & Tuddenham, R. (1956). Persistent stress reaction after combat. *Archives of General Psychiatry*, 12, 475-481.
- Astin, M. C., Lawrence, K. J., & Foy, D. W. (1993). Post-traumatic stress disorder among battered women: Risk and resiliency factors. *Violence and Victims*, 5(1), 17-28.
- Badger, K., Royse, D., & Craig, C. (2008). Hospital social workers and indirect trauma exposure: An exploratory study of contributing factors. *Health and Social Work*, 33 (1), 63-71.
- Baird, S. & Jenkins, S. R. (2003). Vicarious Traumatization, Secondary Traumatic Stress, and Burnout in Sexual Assault and Domestic Violence Agency Staff, *Violence and Victims*, 18, 71-

86.

- Baird, K. & Kracen, A.C. (2006). Vicarious traumatization and secondary traumatic stress: A research synthesis, *Counseling Psychology Quarterly*, 19(2), 181-188.
- Baranowsky, A. B., (2002). The Silencing Response in Clinical Practice: On the Road to Dialogue. In C.R. Figley (Ed.), *Treating Compassion Fatigue* (pp.155-170). New York: Bruner-Routledge.
- Barbour, R.S. (1994). The impact of working with people with HIV/AIDS: A review of the literature. *Social Science Medicine*, 39,2,221-232.
- Beaton, R.D. & Murphy, S.. (1995). Working with people in crisis: Research implications. In C.R. Figley (Ed.), *Compassion fatigue: Coping with secondary traumatic stress disorder* (pp. 51-81). New York, NY: Brunner/Mazel.
- Beaton, R.D., Murphy, S., Johnson, C., & Nemuth, M (2004). Secondary traumatic stress response in fire fighters in the aftermath of 9/11/2001, *Traumatology*, 10(1), 7-16.
- Benedek, E. (1984). The silent scream: Countertransference reactions to victims. *American Journal of Social Psychiatry*, 4(3), 49-52.
- Bennett L, Miller D. & Ross M. eds. (1995). *Health Workers and AIDS: Research, Intervention and Current Issues in Burnout and Response*. Chur, Switzerland: Harwood Academic Publishers.
- Bergmann, M.S. & Jucovy, M.E. (1990). *Generations of the Holocaust*. NY: Columbia University Press, reprint. (Originally published by Basic Books, 1982)
- Birck, A. (2002). Secondary traumatization and burnout in professionals working with torture victims. *Traumatology*, 7, 85-90.
- Boscarino, J.A., Figley, C.R., & Adams, R.E. (2004). Compassion fatigue following the September 11 terrorist attacks: A study of secondary trauma among New York City social workers. *International Journal of Emergency Mental Health* 6(2), 1-10.
- Boulanger, G. (1985). Post-traumatic stress disorder. An old problem with a new name. In S. Sonnenberg, A.S. Blank, & J. Talbott (Eds.), *Stress and recovery in Vietnam veterans* (Chap. 2, pp13-31). Wahinsgton, DC: American Psychiatric Press.
- Brady, J. L., Guy, J. D., Poelstra, P. L.,& Brokaw, B. F. (1999). Vicarious traumatization, spirituality, and the treatment of sexual abuse survivors: A national survey of women psychotherapists. *Professional Psychology: Research and Practice*, 30, 386-393.
- Brett, E.A. (1996). The classification of post-traumatic stress disorder. In B.A. van der Kolk, A.C. McFarlane, & L. Weisaeth (Eds.), *Traumatic stress: The effects of overwhelming experience on*

- mind, body and society* (pp. 117-128). New York: Guilford Press.
- Bride, B. E. (2007). Secondary traumatic stress among social workers. *Social Work, 52*, 63–70.
- Bride, B.E., Robinson, M.R., Yegidis, B., & Figley, C.R. (2004). Development and validation of the Secondary Traumatic Stress Scale. *Research on Social Work Practice, 14*, 27-35.
- Briere, J. & Runtz, M. (1989). The Trauma Symptom Checklist (TSC-33): Early data on a new scale. *Journal of Interpersonal Violence, 4*, 151-163.
- Brown, C. (1998). Understanding stress and burnout in shelter workers. *Professional Psychology: Research and Practice, 29*(4), 383-385.
- Brown, C. & O'Brien, K. M. (1998). Understanding stress and burnout in shelter workers. *Professional Psychology: Research and Practice, 29*(4), 383–385.
- Byrne, M.P. (2006). Strengths-based service planning as a resilience factor in child protective social workers (Doctoral dissertation, Boston College, 2006). *Dissertation Abstracts International, 68*(3).
- Canfield, J. (2005). Secondary traumatization, burnout, and vicarious traumatization: A review of the literature as it relates to therapists who treat trauma. *Smith College Studies in Social Work, 75* (2), 81-101.
- Cassel, J. (1976). The contribution of social environment to host resistance. *American Journal of Epidemiology, 104*, 107-123.
- Chavez, L.J. (2003). *Workplace violence 101: Latest findings on workplace violence*. Retrieved May 2, 2006, from <http://members.aol.com/Endwpv/statistics.html>.
- Chrestman, K.R. (1995,1999). Secondary exposure to trauma and self-reported distress among therapists. In B.H. Stamm (Ed.), *Secondary traumatic stress: Self-care issues for clinicians, researchers, and educators* (pp. 29-36). Lutherville, MD: Sidran Press.
- Clark, M. & Gioro, S. (1998). Nurses, indirect trauma, and prevention. *Image: Journal of Nursing Scholarship, 30*, 85-87.
- Cohen, S. & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310-357.
- Colarossi, L., Heyman, J., & Phillips, M. (2005). Social workers' experiences of the world trade center disaster: stressors and their relationship to symptom types. *Community Mental Health Journal, 41*(2), 185-198.
- Cornille , T. A. & Meyers , T. W . (1999). Secondary traumatic stress among child protective service workers: Prevalence, severity and predictive factors . *Traumatology, 5* , 15 - 31 .



- Courtois, C. A. (1988). *Healing the incest wound: Adult survivors in therapy*. New York: Norton.
- Courtois, C.A. (1993). Vicarious traumatization of the therapist. *NCP A Clinical Newsletter*, 3(Spring), 8–9.
- Creamer, T.L. (2002). Secondary trauma and coping processes among disaster mental health workers responding to the September 11<sup>th</sup> attacks. Unpublished doctoral dissertation, Auburn University, Auburn, Alabama.
- Creamer, T.L. & Liddle, B.J. (2005). Secondary Traumatic Stress among Disaster Mental Health Workers Responding to the September 11 Attacks, *Journal of Traumatic Stress* 18(1): 89-96.
- Cronin-Stubbs, D. & Brophy, E.B. (1985). Burnout: Can social support save the psych nurse? *Journal of Psychosocial Nursing*, 23(7),9-13.
- Cunningham, M. (2003). Impact of trauma work on social work clinicians: Empirical findings. *Social Work*, 48 (4), 451-463.
- Cutrona, C.E. & Russell, D.W. (1990). Type of social support and specific stress: Toward a theory of optimal matching. In B.R. Sarason, I.G. Sarason, & G.R. Pierce (Ed.), *Social support: An interactional view* (pp.319-366). New York, NY: John Wiley & Sons.
- Danieli, Y. (1994). Countertransference and trauma: Self-healing and training issues. In MB Williams & JF Sommer, Jr. (Eds.), *Handbook of post-traumatic therapy*. Westport, CT: Greenwood/Praeger.
- Dean, A., & Lin, N. (1977). The stress-buffering role of social support: Problems and prospects for systematic investigation. *Journal of Nervous and Mental Disease*, 165 (6), 403-417.
- De Croon, E., Sluiter, J., Broersen, J., Blonk, R., & Frings-Dresen, M. (2004). Stressful work, psychological job strain, and turnover: a 2-year prospective cohort study of truck drivers. *Journal of Applied Psychology*, 89 (3), 442-54.
- Derogatis, L. R. (1975). *Brief Symptom Inventory*. Baltimore, MD: Clinical Psychometric Research.
- Dersbimer, R. A. (1990). *Counseling the bereaved*. Elmsford, NY: Pergamon Press.
- Dhooper, S.S., & Byars, L.F. (1989). Stress and the Life Satisfaction of Black Social Workers. *Affilia*, 4,70-78.
- Da Costa, J.M. (1871). On irritable heart: A clinical study of a form of functional cardiac disorder and its consequences. *American Journal of the Medical Sciences*, 61, 17-52.

- Danieli, Y., (1981). *Therapists' difficulties in treating survivors of the Nazi Holocaust and their children*. Ph. D. dissertation. New York University, New York.
- Danieli, Y. (1984). Psychotherapists' participation in the conspiracy of silence about the Holocaust. *Psychoanalytic Psychology*, 1: 23-42.
- Davies, J. M. & Frawley, M.G. (1994). *Treating the adult survivor of childhood sexual abuse: A psychoanalytic perspective*. New York: Basic Books.
- Derogatis, L. R., Lipman, R. S., Rickels, K., Uhlenhuth, E. H., & Covi, L. (1974). *The Hopkins Symptom Checklist (HSCL): A self-report symptom inventory*. Behavioral Science, 19, 1-14.
- Dickes, S.J. (1998). *Treating sexually abused children versus adults: An exploration of secondary traumatic stress and vicarious traumatization among therapists*. Unpublished doctoral dissertation, California School of Professional Psychology, Fresno.
- Dickes, S.J. (2001). Treating sexually abused children versus adults: An exploration of secondary traumatic stress and vicarious traumatization among therapists. *Dissertation Abstracts International*, 62 (3-B), 1571.
- Duquette, A., Kerouac, S., Sandhu, B., & Beaudet, L. (1994). Factors related to nursing burnout: A review of empirical knowledge. *Issues in Mental Health Nursing*, 15, 337-358.
- Edwards, P. & Miltenberger, R. (1991). Burnout among staff at community residential facilities for persons with mental retardation. *Mental Retardation*, 29, 125-128.
- Elhai, J.D., Lindsay, B.M., Gray, M.J., Grubaugh, A.L., North T.C., and Frueh, B.C. (2006). Examining the uniqueness of frequency and intensity symptom ratings in posttraumatic stress disorder assessment, *Journal of Nervous and Mental Disease*, 194, 940-944.
- Elliot, D.M. & Briere, J. (1991). Studying the long-term effects of sexual abuse: The Trauma Symptom Checklist (TSC) scales. In A.W. Burgess (Ed.). *Rape and sexual assault III*. New York: Garland.
- Erichsen, J.E. (1866). *On railway and other injuries of the nervous system*. London: Walton & Moberly.
- Erichsen, J.E. (1886). *On concussion of the spine, nervous shock and other obscure injuries to the nervous system in their clinical and medico-legal aspects*. New York: William Wood.
- Etzion, D. (1984). Moderating effect of social support on the stress-burnout relationship. *Journal of Applied Psychology*, 69(4), 615-622.
- Ewalt, P. (1991). Trends affecting recruitment and retention of social work staff in human services agencies. *Social Work*, 36 (3), 214-217.

- FEMA. (2007). Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, and related authorities. Retrieved May 25, 2009, from [http://www.fema.gov/pdf/about/stafford\\_act.pdf](http://www.fema.gov/pdf/about/stafford_act.pdf)
- Ferenczi, S. (1955). *Final Contributions*. London: Hogarth.
- Figley, C. R. (1978). *Delayed Combat Stress Disorders: Contrasts Among Vietnam Veterans, Korean Veterans, and World War Veterans Recently Inducted into the American Legion*. A Final Report. Indianapolis, Indiana: The American Legion.
- Figley, C. R. (1983). Catastrophes: an overview of family reactions. In *Stress and the family, Vol II, Coping with catastrophe*. Ed. C.R. Figley, and H. I. McCubbin, 3-20. New York: Brunner/Mazel.
- Figley, C.R. (Ed) (1985). *Trauma and Its Wake: The Study and Treatment of Post-Traumatic Stress Disorder*. NY: Brunner/Mazel.
- Figley, C. R. (1988). Toward a field of traumatic stress. *Journal of Traumatic Stress*, 1:1, 3-16.
- Figley, C.R. (1995). *Compassion fatigue as secondary traumatic stress disorder: an overview*. In C.R. Figley (Ed.), *Compassion fatigue: Coping with secondary traumatic stress disorder* (pp. 1-20). New York, NY: Brunner/Mazel.
- Figley, C. R. (1999). Compassion fatigue toward a new understanding of the costs of caring. In *Secondary traumatic stress, Self-care issues for clinicians, researchers, and educators*. Ed. B. Hudnall Stamm, 3-28. Lutherville, Maryland: Sidran Press.
- Figley, C. R. (2002). *Treating Compassion Fatigue*. In the Psychosocial Stress Book Series. New York: Brunner-Routledge.
- Figley, C.R., & Leventman, S. (1990). *Strangers at home: Vietnam Veterans since the war*. New York, N.Y.: Brunner-Routledge.
- Figley, C.R. & Stamm, B.H. (1996). Psychometric review of compassion fatigue self-test. In B.H. Stamm (Ed.), *Measurement of Stress, Trauma and Adaptation*. Lutherville, MD: Sidran Press.
- Firth, H., McIntee, J., McKeown, P., and Britton, P. (1986). Burnout and professional depression: Related concepts? *Journal of Advanced Nursing Studies* 11, 633–641.
- Firth, H., McKeown, P., McIntee, J. and Britton (1987). Professional depression, ‘burnout’ and personality in long stay nursing. *International Journal of Nursing Studies* 24, 227–237.
- Flannery, R.B. (1990). Social support and psychological trauma: A methodological review. *Journal of Traumatic Stress*, 3,4,593-611.
- Fleiss, R. (1953). Countertransference and counteridentification. *Journal of the American*

*Psychoanalytic Association, 1, 268-284.*

- Foa, E. B., Rothbaum, B. O., Riggs, D. S., & Murdoch, T. B. (1991). Treatment of post-traumatic stress disorder in rape victims: A comparison between cognitive-behavioral procedures and counseling. *Journal of Consulting and Clinical Psychology, 59*, 715-723.
- Foa, E.B., Hembree, E.A., & Rothbaum, B.O. (2007). *Prolonged exposure therapy for PTSD: Emotional processing of traumatic experiences therapist guide*. New York: Oxford University Press.
- Folkman, S., Schaefer, C., & Lazarus, R. S. (1979). Cognitive processes as mediators of stress and coping. In V. Hamilton & D. M. Warburton (Eds.), *Human stress and cognition: An information processing approach* (pp. 265–298). London, England: Wiley.
- Frazier, G.H., & Sechrist, S.R. (1994). A comparison of occupational stressors in selected allied health disciplines. *Health Care Supervisors, 13* (1), 53-65.
- Freud, S. (1910). The origin and development of psychoanalysis. *American Journal of Psychology, 2*, 181-218.
- Freud, S. (1913). Totem and taboo. *Standard Edition, 13*, 1-161.
- Freud, A. & Burlingham, D. (1944). *Infants Without Families*. New York: International Universities Press.
- Freudenberger, H. J. (1974). Staff burnout. *Journal of Social Issues, 30*, 159-165.
- Freudenberger, H.J. (1975). The staff burnout syndrome in alternative institutions. *Psychotherapy: Theory, Research and Practice, 12*, 73-82.
- Gabriel, M. (1996). *AIDS trauma and support group therapy: Mutual aid, empowerment, connection*. New York, NY: The Free Press.
- Gentry, J.E., Baranowsky, A.B., & Dunning, K. (2002). ARP: the accelerated recovery program (ARP) for compassion fatigue. In C.R. Figley (Ed.) *Treating Compassion Fatigue* (pp. 123-137). New York: Brunner-Routledge.
- George, J.M., Reed, T.F., Ballard, K.A., Colin, J., & Fielding, J. (1993). Contact with AIDS patients as a source of work-related distress: Effects of organizational and social support. *Academy of Management Journal, 36*, 1, 157-71.
- Germain, C. (1982). An ecological perspective on social work in the schools. In R. T. Constable and J. P. Flynn (Ed.), *School Social Work: Practice and Research Perspectives*. Homewood, IL: Dorsey.
- Ghahramanlou, M. & Brodbeck, C. (2000). Predictors of secondary trauma in sexual assault

- trauma counselors. *International Journal of Emergency Mental Health*, 2, 229-240.
- Good, D.A. (1996). *Secondary traumatic stress in art therapists and related mental health professionals*. Unpublished dissertation, University of New Mexico, Albuquerque.
- Gore, S.(1978). The effect of social support in moderating the health consequences of unemployment. *The Journal of Health and Social Behavior*, 19, 157-165.
- Haley, S.A. (1974). When the patient reports activities. *Archives of General Psychiatry*, 30, 191-196.
- Haley, S. A. (1978). Treatment implications of post-combat stress response syndromes for mental health professionals. In Figley, C. (ed.), *Stress Disorders among Vietnam Veterans*, Brunner/Mazel, New York.
- Harris, C.J. (1995). Sensory-based therapy for crisis counselors. In C.R. Figley (Ed.), *Compassion fatigue: Coping with secondary traumatic stress disorder* (pp.101-114). New York, NY: Brunner/Mazel.
- Haviland M.G., Sonne J.L., & Woods, L.R. (1995). Beyond post-traumatic stress disorder: object relations and reality testing disturbances in physically and sexually abused adolescents. *Psychiatry*, 34,1054–1059.
- Healton, C.G., Haviland, M.L., Weinberg, G.S., Messeri, P., & Aidala, A.A. (1995). *The personal needs study part II: Delivering HIV/AIDS care: The professional care provider speaks out* (C.H.A.I.N. Technical Report #6, August 2, 1995). New York: Columbia School of Public Health.
- Heimann, P. (1950). On countertransference, *International Journal of Psycho-Analysis*, 31, 81-84.
- Heisel, J. M., & Flett, L.G. (2008). Psychological resilience to suicide ideation among older adults. *Clinical Gerontologist*, 31(4), 51-70.
- Helweg-Larsen, R., Hoffmeyer, H., Kieler, J., Thaysen, E. H., Thaysen, J. H., and Thygesen, P. (1952). Famine disease in German concentration camps. *Acta Med. Scand. Suppl.*274: 235-250.
- Herman, J. (1992). *Trauma and recovery: The aftermath of violence from domestic abuse to political terror*. New York, NY: BasicBooks.
- Herman, J. (1997). *Trauma and recovery: The aftermath of violence from domestic abuse to political terror* ((Previous ed.: 1992) ed.). New York, NY: Basic Books.
- Herman, J.L. & Hirschman, L. (1977). Father-daughter incest signs, *Journal of Women in Culture and Society*, 2, 735-56.

- Hilgard, E.R. (1986). *Divided consciousness: Multiple controls in human thought and action* (expanded ed.). New York: Wiley.
- Hodgkinson, P. E. & Shepherd, M. A. (1994). The impact of disaster support work. *Journal of Traumatic Stress, 7*,587-600.
- Hogan, B.E., Linden, W., & Najarian, B.(2002). Social support interventions: Do they work? *Clinical Psychology Review,22*,381-440.
- Horowitz, M. (1986). *Stress response syndromes* (2<sup>nd</sup> ed.). Northvale, NJ: Aronson.
- Horowitz, M. (1998). Social worker trauma: Building resilience in child protection social workers. *Smith College Studies in Social Work, 68*,363–377.
- Horowitz, M.J., Wilner, N.R., & Alvarez, W. (1979). Impact of Event Scale: A measure of subjective distress. *Psychosomatic Medicine, 41*, 208-218.
- Horsman, J.M. & Sheeran, P. (1995). Health care workers and HIV/AIDS: A critical review of the literature. *Social Science Medicine, 41*,11, 1535-1567.
- House, J.S. & Kahn, R.L. (1985). Measures and concepts of social support. In S. Cohen & S.L. Syme (Eds.). *Social support and health* (pp.83-108). London: Academic Press, Inc.
- Iliffe, G. & Steed, L.G. (2000). Exploring the experience of working with perpetrators and survivors of domestic violence. *Journal of Interpersonal Violence, 15* (4), 393-412.
- Jacobs, G.A. (1995). The development of a national plan for disaster mental health. *Professional Psychology: Research and Practice, 26*, 543-549.
- Janet, P. (1889). *L'automatisme psychologique*. Paris: Alcan.
- Kassam-Adams, N. (1995). *The risks of treating sexual trauma: Stress and secondary trauma in psychotherapists*. Unpublished dissertation, University of Virginia, Charlottesville.
- Kenworthy, T. (Sept. 27, 2004). The Columbine High School Shootings. *USA Today, News*, p.03a.
- Kinross, L. (1992). Nurse assault: Overcoming the barriers to prevention. Nursing report. *Canadian Nursing Management, 49*, 4-8.
- Kleber, R.J., Figley, C.R., & Gersons, B.P.R. (Eds.). (1995). *Beyond trauma: Cultural and societal dynamics* (pp.299-308). New York: Plenum Press.
- Koeske, G.F. & Koeske, R.D. (1989). Work load and burnout: Can social support and perceived accomplishment help? *Social Work, May*.

- Koeske, G. F., & Koeske, R. D. (1990). The buffering effect of social support on negative consequences of parenting stress. *American Journal of Orthopsychiatry*, *60*, 440-451.
- Landry, L.P. (1999). Secondary traumatic stress disorder in the therapist from the Oklahoma City bombing. University of North Texas. Doctoral Dissertation. Available UMI order No. AAT99-81105.
- Lazarus, R.S.(1991). Psychological stress in the workplace. *Journal of Social Behavior and Personality*, *6*,7,1-13.
- Lazarus, R.S. (1998). *The Life and Work of an Eminent Psychologist: Autobiography of Richard S. Lazarus*. New York: Springer.
- Lazarus, R.S. & Folkman, S. (1984). *Stress, Appraisal and Coping*. New York: Springer.
- Lazarus, R.S. & Folkman, S. (1987) Transactional theory and research on emotions and coping. *European Journal of Personality*, *1*, 141-170.
- Lee, C. S. (1995). Secondary traumatic stress in therapists who are exposed to client traumatic material (Doctoral dissertation, Florida State University. 1995). *Dissertation Abstracts International*,*56*(8),4586.
- Lepore, S. J. (1992). Social conflict, social support, and psychological distress: Evidence of cross-domain buffering. *Journal of Personality and Social Psychology*, *63*, 857-867.
- Lepore, M. (2004). Assessing the frequency and influences of secondary traumatic stress symptoms among crisis intervention workers (Doctoral dissertation, Duquesne University, 2004). *Dissertation Abstracts International*, *65* (7), 2520.
- Lepore, S. J., Evans, G. W., & Schneider, M. L. (1991). Dynamic role of social support in the link between chronic stress and psychological distress. *Journal of Personality and Social Psychology*, *61*, 899-909.
- Lin, N., Woelfel, M.W., & Light,S.C. (1985). The Buffering Effect of Social Support Subsequent to an Important Life Event, *Journal of Health and Social Behavior*,*26*,3 247 -263.
- Lind, E.W. (2000). Secondary traumatic stress: Predictors in psychologists (Doctoral dissertation, Seattle Pacific University, 2000), *Dissertation Abstracts International*, *61*(6),3283.
- Lindy, J.D. (1987). *Vietnam: A casebook*, New York: Brunner/Mazel.
- Lord, V.B. (2001). The implementation of workplace violence policy in state government. *Violence and Victims*, *16*, 185-202.
- Lybeck-Brown, J.C. (2002). Vicarious traumatization of psychotherapists: Implications for theory, training, and practice (Doctoral dissertation, Southern Illinois University at Carbondale, 2002),

*Dissertation Abstracts International*, 63(9), 4377.

- Maroda, K.J. (1991). *The power of countertransference: Innovations in analytic technique*. New York: Wiley.
- McCann, L. & Pearlman, L. (1989). Vicarious traumatization: A framework for understanding the psychological effects of working with victims. *Journal of Traumatic Stress*, 3(1), 131- 149.
- McCann, I. L. & Pearlman, L.A. (1990). *Psychological trauma and the adult survivor: Theory, therapy, and transformation*. New York: Brunner/Mazel.
- Maslach, C. (1976). Burned-out. *Human Behavior*, 5(9), 16-22.
- Maslach, C. (1978). The client role in staff burn-out. *Journal of Social Issues*, 34(4), 111-124.
- Maslach, C. (1982). *Burnout: The cost of caring*. Upper Saddle River, NJ : Prentice Hall.
- Maslach, C. & Jackson, S. E. (1981). *Maslach Burnout Inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Maslach, C. & Leiter, M.P. (1997). *The truth about burnout*. San Francisco, CA: Jossey-Bass.
- Maslach, C. & Pines, A. (1977). The burn-out syndrome in the day care setting. *Child Care Quarterly*, 6, 100-113.
- Masson, J.M. (1985). *The Complete Letters of Sigmund Freud to Wilhelm Fliess. 1887-1904*. New York: Grove.
- Myers, A. B. R. (1870). *On the aetiology and prevalence of disease of the heart among soldiers*. London: J. Churchill.
- Myers, D. (1994). *Disaster response and recovery: A handbook for mental health professionals*. Rockville, MD: U.S. Department of Health and Human Services, PHS, SAMHSA, Center for Mental Health Services, DHHS No. (SMA) 94-3010.
- Meyers, T.W. (1996). The relationship between family of origin functioning, trauma history, exposure to children's trauma and secondary traumatic stress symptoms in child protective service workers (Doctoral dissertation, The Florida State University, 1997). *Dissertation Abstracts International*, 57(11), 4931.
- Meyers, T.W. & Cornille, T.Z. (2002). The trauma of working with traumatized children. In C.R. Figley (Ed.), *Treating compassion fatigue* (pp. 39–55). New York: Brunner-Routledge.
- Moskos, C. (1981). Making the all-volunteer force work, *Foreign Affairs* 60, 17–334.
- National Association of Social Workers (NASW). (1987). A colleague assistance program. In



- Social work speaks* (2<sup>nd</sup> ed.). Silver Spring, MD: Author.
- National Association of Social Workers (NASW). (1994). The impaired professional. In *Social work speaks* (3<sup>rd</sup> ed.). Washington, DC: NASW Press.
- National Association of Social Workers (NASW). (1996). *NASW code of ethics*. Washington, DC: NASW Press.
- National Association of Social Workers (NASW). (2003). *Social Work Speaks* (6<sup>th</sup> ed). Washington, DC: NASW Press.
- National Association of Social Workers (NASW). (2006). *Social Work Speaks* (7<sup>th</sup> ed). Washington, DC: NASW Press.
- National Association of Social Workers (NASW). (2008). *Code of Ethics of the National Association of Social Workers*. Retrieved June 8, 2009, from <http://www.socialworkers.org/pubs/code/code.asp>
- National Association of Social Workers (NASW) Practice Research Network. (2005, January). *Practice Research Network III: Final Report*. Washington, DC: NASW Press.
- Naturale, A. (2007). Secondary traumatic stress in social workers responding to disasters: Reports from the field. *Clinical Social Work Journal*, 35, 173-181.
- Naturale, A. (2009). *Selected professional predictors of post-traumatic and secondary traumatic stress: The long term impact of 9/11/01 in a sample of Manhattan social workers in direct practice*. Unpublished dissertation, New York University, New York.
- McFarlane, A.C. & Weisaeth, L. (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body, and society* (pp. 242-275). New York: Guilford Press.
- New York State Office of Mental Health. (2005). 2005-2009 Statewide Comprehensive Plan for Mental Health Services Appendix 5: Project Liberty Service Delivery. Retrieved June 30, 2006, from <http://www.omh.state.ny.us/omhweb/Statewideplan/2005/appendix5.htm>
- Nelson-Gardell, D. & Harris, D. (2003). Childhood abuse history, secondary traumatic stress, and child welfare workers. *Child Welfare*, 82 (1), 5-26.
- Neumann, D. & Gamble, S. (1995). Issues in the professional development of psychotherapists: Counter transference and vicarious traumatization in the new trauma therapist. *Psychotherapy*, 32(2), 341-348.
- Newell, M.J.(2008). An investigation of the occupational stresses associated with providing direct clinical services to adults diagnosed with mental illness (Doctoral dissertation, University of Alabama, 2009). *Dissertation Abstracts International*, 69 (10).

- Newman, E., Kaloupek, D. G., & Keane, T. M. (1996). Assessment of Post-traumatic Stress Disorder in clinical and research settings. In B.A. Van der Kolk, A.C. McFarlane, & L. Weisaeth (1996). *Traumatic stress: The effects of overwhelming experience on mind, body, and society*. New York: The Guilford Press.
- Office of the Federal Register National Archives and Records Administration. (2008). *Emergency Management and Assistance: Containing a codification of documents of general applicability and future effect*: Author.
- Oppenheim, H. (1889). *Die traumatische Neurosen*. Berlin: Hirschwald.
- Pearlman, L.A. (1998). Trauma and the self: A theoretical and clinical perspective. *Journal of Emotional Abuse*, 1, 7-25.
- Pearlman, L.A. (1999). Self-care for trauma therapists: Ameliorating vicarious traumatization. In B.H. Stamm (Ed.) *Secondary traumatic stress: Self-care issues for clinicians, researchers, & educators* (2<sup>nd</sup> ed., pp 51-64). Lutherville, MD: Sidran Press.
- Pearlman, L.A. & MacIain, P.S. (1995). Vicarious traumatization: An empirical study of the effects of trauma work on trauma therapists. *Professional Psychology: Research & Practice*, 26 (6), 558-565.
- Pearlman, L.A. & Saakvitne, K.W.(1995). *Trauma and the therapist: Countertransference and vicarious traumatization in psychotherapy with incest survivors*. New York: W.W. Norton & Company.
- Perrin, M.A., DiGrande, L., Wheeler, K., Thorpe, L., Farfel, M., & Brackbill, R. (2007). Differences in PTSD prevalence and associated risk factors among world trade center disaster rescue and recovery workers. *Psychiatry*, 164 (9), 1385-1394.
- Perron, B. & Hiltz, B.S. (2006). Burnout and secondary trauma among forensic interviewers of abused children. *Child and Adolescent Social Work Journal*, 23 (2), 216-234.
- Phillips, D. K. (1990). Subjecting the veterans administration to court review. In C. Figley and S. Leventman (Ed.), *Strangers at home: Vietnam veterans since the war*. New York: Brunner/Mazel.
- Pines, A. M. (1993). Burnout an existential perspective. In W. Schaufeli, C. Malach, & T. Marek (Eds.), *Professional burnout: Developments in theory and research* (pp. 33-52). Washington, DC: Taylor and Francis.
- Pines, A.M., & Maslach, C. (1978). Characteristics of staff burn-out in mental health settings. *Hospital & Community Psychiatry*. 29, 233-237.
- Pinsley, O.S. (2000). Bearing witness: An investigation of vicarious traumatization in therapists who treat adult survivors of rape and incest. *Dissertation Abstracts International*, 61(4-

- A),1616. (University Microfilms No. AAI9968483).
- Ptacek, J.T., Patterson, D.R., Montgomery, K.B., & Heimbach D.M. (1995). Pain, coping and adjustment in patients with burns: Preliminary findings from a prospective study. *Journal of Pain and Symptom Management, 10*, 446– 455.
- Pulido, M. L. (2005). The terrorist attacks on the World Trade Center on 9/11: The dimensions of indirect exposure levels in relation to the development of post-traumatic stress symptoms. The ripple effect (Doctoral dissertation, City University of New York, 2005). *Dissertation Abstracts International, 66* (3), 1166.
- Pulido, M. L. (2007). In Their Words: Secondary Traumatic Stress in Social Workers Responding to the 9/11 Terrorist Attacks in New York City. *Social Work, 52*, 3, 279-281.
- Putnam, J.J. (1898). On the etiology and pathogenesis of the post-traumatic psychoses and neuroses. *Journal of Nervous and Mental Disease, 25*, 769-799.
- Randall, R. R., Altmaier, E. M., & Russell, D. W. (1989). Job stress, social support, and burnout among counseling center staff. *Journal of Counseling Psychology, 36*, 464-470.
- Reik, T (1937). *Surprise and the psychoanalyst*. New York: E. P. Dutton.
- Rogentine, K.L. (1997). Interacting with trauma: Child protective service workers' response to working with child abuse and neglect (Doctoral dissertation, California School of Professional Psychology, 1997). *Dissertation Abstracts International, 57*(10), 6590.
- Ross, R.R., Altmaier, E.M., & Russell, D.W. (1989). Job stress, social support and burnout among counseling center staff. *Journal of Counseling Psychology, 36*(4), 464-470.
- Savicki, V. & Cooley, E.J. (1987). The relationship of work environment and client contact to burnout in mental health professionals. *Journal of Counseling and Development, 65*, 249-252.
- Savicki, V. & Cooley, E.J. (1994). Burnout in child protective service workers: A longitudinal study. *Journal of Organizational Behavior, 15*, 655-666.
- Scafer, C., Coyne, J.C., & Lazarus, R.S. (1981). The health-related functions of social support. *Journal of Behavioral Medicine, 4*,4,381-406.
- Scott, W. J. (1993). *The politics of readjustment: Vietnam veterans since the war*. New York.
- Schauben, L. J. & Frazier, P.A. (1995). Vicarious Trauma: The effects on female counselors of working with sexual violence survivors. *Psychology of Women Quarterly, 19*, 49-64.
- Sexton, L. (1999). Vicarious traumatization of counselors and effects on their workplaces. *British Journal of Guidance and Counseling, 27* (3), 393-403.

- Shaefer, C., Coyne, J.C., & Lazarus, R.S. (1981). The health-related functions of social support. *Journal of Behavioral Medicine*, 4, 4, 381-406.
- Simon, C.E., Pryce, J.G., Roff, L. L., & Klemmack, D. (2006). Secondary traumatic stress and oncology social work: Protecting from fatigue and compromising the worker's worldview. *Journal of Psychosocial Oncology*, 23, 1-14.
- Simonds, S.L. (1996). Vicarious traumatization in therapists treating adult survivors of childhood sexual abuse. *Dissertation Abstracts International*, 57, 8-B, 5344. (University Microfilm No. AAM9702738).
- Slattery, S.M. (2003). Contributors to secondary traumatic stress and burnout among domestic violence advocates: An ecological approach. *Dissertation Abstracts International*, 64, 08, 4064. (University Microfilms No. AAT 3103222).
- Soederfeldt, M., Soederfeldt B., & Warg, L.E. (1995). Burnout in social work. *Social Work* 40: 638-646.
- Sparks, R. F. (1982). *Research on victims of crime*. Washington, DC: Government Printing Office.
- Stamm, B.H. (Ed.).(1997). *Measurement of stress, trauma and adaptation*. Lutherville, MD: The Sidran Press.
- Stamm, B. H. (2002). Measuring compassion satisfaction as well as fatigue: developmental history of the compassion satisfaction and fatigue test. In C.R. Figley (Ed.) *Treating Compassion Fatigue* (pp. 107-119). New York: Brunner-Routledge.
- Stamm, B. H. (2003). *Professional quality of life: Compassion fatigue and satisfaction subscales, R-III(Pro-QOL)*. Retrieved June 21, 2004, from <http://www.isu.edu/~bhstamm/tests.htm#The%20ProQOL>
- Stamm, B. H. (2005). *The ProQOL Manual: The professional quality of life scale: Compassion satisfaction, burnout and compassion fatigue/secondary trauma scales*. Retrieved May 9, 2009, from [http://www.isu.edu/~bhstamm/documents/proqol/ProQOL\\_Manual\\_Oct05.pdf](http://www.isu.edu/~bhstamm/documents/proqol/ProQOL_Manual_Oct05.pdf).
- Stamm, B. H. & Figley, C. R. (1998). *Compassion Satisfaction/Fatigue Self-Test for Helpers*. Retrieved from <http://www.isu.edu/bhstamm/pdf/satfat.pdf>
- Stewart, M. & Hodgkinson, P (1994). Post-Traumatic Stress Reactions in the Professional. In *Coping with Trauma: The Victim and Helper*, eds. Rod Watts and David J. de L. Horne, 53-72. Brisbane, Qld: Australian Academic Press.
- Strecker, E. A. & Appel, K. E. (1945). *Psychiatry in modern warfare*. New York: Macmillan.
- Sullivan, L. (2003). Staff development and secondary traumatic stress among AIDS staff.

- Dissertation Abstracts International*, 65, 6-A, 2365. (University Microfilms No. AAT 3136129).
- Thoits, P.A. (1982). Life stress, social support, and psychological vulnerability: Epidemiological considerations. *Journal of Community Psychology*, 10, 341-362.
- Ting, L., Jacobson J.M., Sanders, S., Bride, B. E., & Harrington, D. (2005). The secondary traumatic stress scale (STSS): Confirmatory factor analyses with a national sample of mental health social workers, *Journal of Human Behavior in the Social Environment*, 11 (3/4), 177-194.
- Tohru, T., Kondo, T., & Sakihara, S. (2006). Stress buffering effects of social support on depressive symptoms in middle age: Reciprocity and community mental health, *Psychiatry and Clinical Neurosciences*, 60(6), 652-661.
- Tosone, C. (2009, January). *Shared Traumatic Stress and the Post 9/11/01 Quality of Professional Practice*. Paper presented at the meeting of the Society for Social Work Research, New Orleans, LA.
- Turner, N.T. (2007). How towns recover after a disaster: The case of Princeville, NC. (Doctoral dissertation, Morgan State University, 2007). *Dissertation Abstracts International*, 45(05), 2365.
- Turnipseed, D.L. (1998). Anxiety and burnout in the health care work environment. *Psychological Reports*, 82, 627-642.
- U.S. Department of Labor, Occupational Safety and Health Administration. (n.d.). *OSH Act of 1970*, Retrieved February 25, 2006, from <http://www.osha.gov>.
- U.S. Department of Labor, Occupational Safety and Health Administration. (2004). *Guidelines for preventing workplace violence for health care and social service workers*. Retrieved February 25, 2006, from <http://www.osha.gov>.
- U.S. General Services Administration (2008). Catalog of federal domestic assistance. Retrieved March 8, 2009, from [https://www.cfda.gov/downloads/CFDA\\_2008.pdf](https://www.cfda.gov/downloads/CFDA_2008.pdf)
- Valent, P. (1995). Survival strategies: a framework for understanding secondary traumatic stress and coping in helpers. In Figley, C.R. (Ed.) *Compassion Fatigue: Secondary Traumatic Stress Disorder in Helpers*. New York: Brunner/Mazel.
- Van der Kolk, B.A., McFarlane, A.C., and Weisaeth, L. (1996). *Traumatic stress: The effects of overwhelming experience on mind, body, and society*. New York: The Guilford Press.
- Van der Kolk, B.A., Weisaeth, L., & Van Der Hart, O.(1996). History of trauma in psychiatry. In B.A. Van der Kolk, A.C. McFarlane, & L.Weisaeth (1996). *Traumatic stress: The effects of overwhelming experience on mind, body, and society*. New York: The Guilford Press.

- VanDeusen, K. M., & Way, I. (2006). Vicarious Trauma: An Exploratory Study of the Impact of Providing Sexual Abuse Treatment on Clinicians' Trust and Intimacy, *Journal of Child Sexual Abuse, 15*, 69-85.
- Van Dierendonck, D., Schaufeli, W.B., & Buunk, B.P. (1998). The evaluation of an individual burnout intervention program: The role of inequity and social support. *Journal of Applied Psychology, 83*(3), 392-407.
- Van Y. Peren, N.W., Buunk, B.P., & Schaufeli, W.B. (1992). Communal orientation and the burnout syndrome among nurses. *Journal of Applied Psychology, 22*(3), 173-189.
- Walker, L.E. (1977). Battered women and learned helplessness. *Victimology: an International Journal, 2*(3/4), 525-534.
- Wallston, R.S., Alagna, S.W., DeVellis, B.M., & DeVellis, R.F. (1983). Social supports and physical health. *Health Psychology, 2*, 367-391.
- Walton, D.T. (1997). Vicarious traumatization of therapists working with trauma survivors: An investigation of the traumatization process including therapist's empathy style, cognitive schemas and the role of protective factors. *Dissertation Abstracts International, 58*, 03B, 1552.
- Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T.M. (1993, October). *The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility*. Paper presented at the meeting of the International Society for Traumatic Stress Studies, San Antonio, TX.
- Wee, D.F. & Myers, D. (2002). Stress response of mental health workers following disaster: The Oklahoma City bombing. In E. Figley (Ed.), *Treating compassion fatigue*. New York: Bruner/Mazel.
- Weiss, D.S. & Marmar C.R. (1996). The Impact of Event Scale-Revised. In Wilson, J.P., Keane, T.M. (Eds.), *Assessing psychological trauma and PTSD*. Guilford Press, New York, 399-411.
- Weiss, D.W., & Marmar, C.R. (1997). The impact of event scale – revised. in Wilson, J.P., Keane, T.S. (Eds), *Assessing Psychological Trauma and PTSD: A handbook for practitioners*. Guildford, New York, NY.
- Weiss, R. (1974). The provisions of social relationships. In Z. Rubin (Ed.) *Doing unto others: joining, molding, conforming, helping, loving*. Englewood Cliffs, NJ: Prentice-Hal, Inc.
- White, G.D. (2001). Near ground zero: compassion fatigue in the aftermath of September 11. *Traumatology, 7*, 151-154.
- Williams, C. M. (1980). The veteran system—With a focus on women partners: Theoretical considerations, problems, and treatment strategies. In T. Williams (Ed.), *Post-traumatic stress disorders of Vietnam veterans*. Cincinnati, OH: Disabled American Veterans.

Wilson, J. P. (1989). *Trauma, transference and healing*. New York: Brunner-Mazel.

Wilson, J. P., & Lindy, J.D. (Eds.). (1994). *Countertransference in the treatment of PTSD*. New York: The Guildford Press.

Woodward, B. (2001). *Bush at war*. New York: SIMON & SCHUSTER.