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Factors Involved in the Retention of American Red Cross Disaster and Emergency Services Volunteers

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Abstract

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MA, Marist College, 1999

BA, Purdue University, 1997

Dissertation Submitted in Partial Fulfillment

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Abstract

According to the Corporation for National and Community Service (2007), 33% of workers who volunteer in one year do not volunteer the next year. Retention of disaster and emergency services volunteers is a problem because permanent disaster volunteers save governments and society millions of dollars each year. The purpose of this quantitative, cross-sectional study was to address the problem of retention of American Red Cross disaster and emergency services volunteers. The primary research question for this study examined the predictive strength of positive emotions, resiliency, coping, and post-traumatic growth, in the retention of disaster and emergency services volunteers. The broaden-and-build theory of positive emotions combined with the organismic valuing theory of growth through adversity created the optimal research foundation for driving the hypotheses for the research question. This study used a self-report survey to collect data from a nonprobability convenience sample of 120 American Red Cross Disaster and Emergency Services volunteers. Standard multiple linear regression analyses revealed that none of the independent variables statistically predicted retention. Independent-groups *t*-tests revealed that, a *debriefing at the disaster location* showed significant mean differences when examining retention. The American Red Cross and other disaster relief organizations can use the results of this study to develop strategies to address organizational factors that enhance the experiences of their disaster and emergency services volunteers and thus strive to improve retention.

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Dedication

I dedicate this dissertation and my PhD to my parents, Stephen Moravick, Sr., and Rose (DePaoli) Moravick. My father passed away in March of 2014, so he is not physically here to see the completion of my dissertation and PhD. However, as a Christian, I know that my father is witnessing all that I do from the balconies of Heaven. My parents supported my dream of completing a PhD and for their love and support, I am forever grateful. I dedicate this dissertation and my PhD to my sister Stephanie (Moravick) Carter and my brother Steve Moravick, Jr. As my older siblings, you paved the way for me and showed me that whatever we put our minds to, we can accomplish. I dedicate this dissertation and PhD to my extended family members and friends. Your love and support during my PhD journey has meant the world to me.

My life is, and will always be, dedicated to Jesus Christ, for without HIM, I am nothing. I know that HE told me many years ago that I would not 'need' my PhD, however, I asked HIM to humor me and allow me to finish. I am humbly grateful for all that God has done for me, through me, and in my heart and Spirit, as I endured this 12-year PhD journey with HIM. I look forward to what God has in store for me and whether my PhD will ever be 'needed'. I joyfully forego my will for God's will. Amen and Shalom to all.

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It is with sincere, heartfelt gratitude that I acknowledge Dr. Disch, my Dissertation Chair and friend, for without him, my dissertation would not exist. From day one, Dr. Disch gave me the encouragement and support I needed to pursue my dream of completing my PhD in Clinical Psychology. Dr. Disch saw the potential in me, even when I did not see it myself. Over the many years it took to me to complete this dissertation, Dr. Disch stood by me, challenged me, pushed me when I needed a push, and showed much empathy when life knocked me down with my father's passing in 2014. I humbly thank you Dr. Disch, for giving me the opportunity to fulfill my dream and for making me a better person in the process.

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Chapter 1: Introduction to the Study

Introduction

The purpose of this quantitative, cross-sectional study was to assess how the constructs of positive emotions, resiliency, coping, and post-traumatic growth work together to predict retention among American Red Cross disaster and emergency services volunteers. Disasters, both natural and man-made, are an everyday occurrence somewhere in our world (American National Red Cross, 2016). When disasters strike, who are the people who sacrifice their time and energy to help those in crisis? The disaster and emergency services volunteers of the numerous disaster relief organizations around the world are the committed men and women who dedicate themselves to help others in times of natural and man-made crises such as American Red Cross, Salvation Army, Samaritan's Purse, and the International Red Cross and Red Crescent Societies.

The largest and most well-known disaster relief organization in the United States is the American Red Cross, which has been providing relief services since 1881 (Morgan, 1995). Every year, victims of nearly 70,000 disasters reach out for help from the more than 700,000 volunteers and 34,000 paid employees in the nearly 720 locally supported chapters of the American Red Cross (American National Red Cross, 2016). Volunteers constitute 96% of the American Red Cross work force.

The American Red Cross is a community based nonprofit agency that encounters obstacles to volunteer retention (Hager & Brudney, 2004) similar to the obstacles faced by other nonprofit agencies. The services imparted by community and nonprofit organizations are made possible through the time and aptitude of each organization's

workers, most of whom are volunteers and thus not paid for their work (Corporation for National & and Community Service, 2007. Most non-profit organizations have dedicated extensive attention to recognizing, enlisting, and supervising volunteers. However, a lesser amount of interest has been concentrated on how to preserve and maintain a secure volunteer base of individuals (Hager & Brudney, 2004).

According to the U.S. Bureau of Labor Statistics (2015), the volunteer rate declined by .10 percentage points to 25.3 % for the year ending in September 2014. About 62.8 million people volunteered through or for an organization at least once between September 2013 and September 2014 (U.S. Bureau of Labor Statistics, 2014). When a natural or man-made disaster occurs, the American Red Cross promptly identifies disaster and emergency services volunteers via their volunteer connection database for recruiting (Kinsel & Thomasgard, 2008). Considering the magnitude of destruction (and possible death) witnessed by the disaster and emergency services volunteers, one problem that may arise for the American Red Cross is how to retain the large number of volunteers needed to operate successfully the humanitarian efforts of the organization.

Background

Volunteering is an "activity in which time is given freely to benefit another person, group, or cause" (Wilson, 2000, p. 215). According to the Corporation for National and Community Service, "1 in 3 workers who volunteer in one year do not volunteer the next year; a 66% volunteer retention rate" (2007, p. 1). This statistic reveals the impetus for this study. I chose to examine one specific group of volunteers, the

American Red Cross disaster and emergency services volunteers. Raphael, Singh, Bradbury, and Lambert (1983-1984) conducted one of the seminal studies on emergency services volunteers. The authors examined how disaster relief work affected disaster and emergency services volunteers. The authors found that, because of their disaster and emergency services work, one third of their respondents who had dealt with a major rail accident, "felt more positive about their own life" (p. 13). In another study, Dyregrov, Kristofferson, and Gjestad (1996), found that the two most frequent reactions to disaster and emergency services work in both voluntary and professional workers were (a) the necessity to be near family and friends and (b) the revelation of internal fortitude. Linley and Joseph (2004) reviewed 39 empirical studies that documented positive change following trauma and adversity. A review of the empirical studies by Linley and Joseph (2004) is provided in Chapter 2. Further research by Linley and Joseph (2006) provided empirical confirmation on variables linked with both positive changes and post-traumatic growth among the disaster and emergency services volunteers.

Problem Statement

All across America, unpaid volunteers contribute their time and talent to assist community and nonprofit organizations (Corporation for National and Community Service, 2007). Retention of volunteers is a problem because according to Baxter-Tomkins and Wallace (2006), permanent disaster volunteers save governments and society millions of dollars each year. Villagran, Wittenberg-Lyles, and Garza (2006) highlight that due to organizations such as the American Red Cross that rely heavily on volunteers, it is imperative to examine the values and experiences of volunteers.

Researching and understanding American Red Cross volunteers may help influence recruitment and retention of their disaster and emergency services volunteers (Brants, 2014). Organizations such as the American Red Cross have dedicated substantial attention to identifying, recruiting, and managing volunteers; however, much less attention has been devoted to the means in which volunteer retention can be successful (Corporation for National and Community Service, 2007).

Within the last 15 years, researchers have examined disaster and emergency services work as it pertains to post-traumatic growth (Joseph & Linley, 2005), coping and resiliency, and positive emotions (Fredrickson, Tugade, Waugh, & Larkin, 2003). Past research has focused primarily on groups such as paid British disaster management workers (Linley & Joseph, 2006), college students and their parents (Fredrickson et al., 2003), and trauma survivors (Payne, Joseph, & Tudway, 2007). There is a marked paucity in research literature regarding how certain independent variables such as positive emotions, resiliency, coping, and post-traumatic growth predict the dependent variable of the retention of disaster and emergency services volunteers. I proposed that positive emotions, resiliency, coping, and post-traumatic growth would serve to explain how American Red Cross disaster and emergency services volunteers are able to persist despite the trauma and adversity that they frequently endure.

Purpose

The purpose of this quantitative, cross-sectional study was to address the problem of disaster and emergency services volunteer retention in the American Red Cross. The importance of this current study was to understand which factors were or were not

predictive of the retention of disaster and emergency services volunteers. These predictors of retention of disaster and emergency services volunteers could help disaster relief organizations such as the American Red Cross better understand how to retain their disaster and emergency service volunteers. A research design model is shown in Figure 1 below.

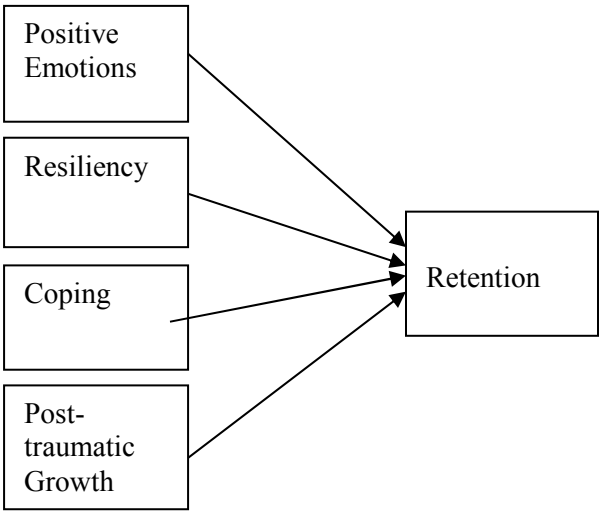

Figure 1. Model of research hypotheses: Positive emotions, resiliency, coping, post-traumatic growth, and retention.

Research Questions and Hypotheses

I developed the following research questions and hypotheses after reviewing the limited existing literature in the area of the factors involved in the retention of American Red Cross disaster and emergency services volunteers. The predictor variables in this current study were positive emotions (Izard, 1993), resiliency (Block & Kremen, 1996), coping (Fava, Ruggiero, & Grimley, 1998), and post-traumatic growth (Tedeschi & Calhoun, 1996; Joseph et al., 2005). The outcome variable was the retention of disaster

and emergency services volunteers measured by the volunteer's length of service. There will be a more detailed discussion of the nature of this study in Chapter 3.

RQ#1: What are the natures of the relationships between the independent variables (positive emotions, resiliency, coping, and post-traumatic growth) and the dependent variable (retention) as measured by the length of service?

$H_0$1: There are not statistically significant correlations between the independent variables and the dependent variable.

$H_1$1: There are statistically significant correlations between the independent variables and the dependent variable.

RQ#2: What is the predictive relationship between the independent variables and the dependent variable?

$H_0$2: The independent variables will not statistically predict the dependent variable.

$H_1$2: At least one independent variable will statistically predict the dependent variable.

RQ#3: For all variables, are there statistically significant differences between mean scores based on genders?

$H_0$3: There are no statistically significant differences between mean scores across genders, for all variables.

$H_1$3: There are statistically significant differences between mean scores across genders, for all variables.

RQ#4: Are there statistically significant mean differences for at least one of the seven independent variable volunteer factors (direct client contact, take time off, mental health services available, utilization of mental health services, location debriefing, chapter debriefing, and leave family behind) that occur as a result of the American Red Cross disaster and emergency services experience and the dependent variable (retention)?

$H_0$4: There is not a statistically significant mean difference between at least one of the seven independent variable volunteer factors and the dependent variable.

$H_1$4: There is a statistically significant mean difference between at least one of the seven independent variable volunteer factors and the dependent variable.

Theoretical Framework

This current study focused on an examination of positive emotions, resiliency, coping, and post-traumatic growth constructs, which narrows the gap in the theoretical research literature. There are two theories that created the framework for this study. The theories are the broaden-and-build theory of positive emotions (Fredrickson, 1998, 2001) and the organismic valuing theory of growth through adversity (Joseph and Linley, 2005). The broaden-and-build theory of positive emotions (Fredrickson, 1998, 2001) is based on positive emotions, resiliency, and coping. The organismic valuing theory of growth through adversity (Joseph and Linley, 2005) is based on post-traumatic growth.

Broaden-and-Build Theory

The broaden-and-build theory of positive emotions is a framework for explaining psychological resilience (Fredrickson, 1998, 2001). The major premise of the theory is that resilient people have the ability to cultivate positive emotions in themselves to cope in stressful situations (Tugade, Fredrickson, & Barrett, 2004). Several researchers have made similar claims that experiences of positive affect during chronic stress help people cope (Lazarus, 1981; Folkman, 1997; Folkman & Moskowitz, 2000). The capacity for resilience in disaster and emergency services volunteers is critical because disaster and emergency services volunteers must be able to rebound from adversity and stress, be able to defend themselves against depression, and be able to maintain their maturity in stressful situations (Fredrickson et al., 2003; Ong, Bergemann, Bisconti, & Wallace, 2006; Tugade & Fredrickson, 2004). More importantly, these positive emotions function as reserves that can be drawn on later to improve the odds of successful coping and survival in stressful situations (Fredrickson, 2000).

The principles of Fredrickson's (1998, 2001) broaden-and-build theory as they relate to this current study are: (a) as American Red Cross disaster and emergency services volunteers experiences positive emotions, they are able to transform themselves, becoming more creative, knowledgeable, resilient, socially integrated, and healthy individuals (Fredrickson, 2004); and (b)in addition to transforming themselves, those who experience positive emotions are capable of generating positive emotions in others, which helps to create an accommodating social context that facilitates coping (Demos, 1989; Werner & Smith, 1992; Kumpfer, 1999). Resiliency helps individuals to develop

positive strategies for coping with the effects of disaster and emergency services work (Fredrickson, 2004).

Organismic Valuing Theory of Growth through Adversity

Within the last decade, the subject of growth after adversity has become the focal point for empirical work (Joseph, 2009). There has been an increase in literature that documents positive changes for individuals following a wide variety of stressful and traumatic events (Linley & Joseph, 2004). The organismic valuing theory is a thorough and stylish theoretical analysis of how growth can occur through adversity (Joseph & Linley, 2005). The organismic valuing process (OVP) refers to people's innate aptitude to know what is significant to them and what is necessary for a satisfying life. The underpinning of the theory is that people are motivated to move in a growthful route (Joseph, 2009). The principle of Joseph and Linley's (2005) organismic valuing theory of growth through adversity as it relates to this current study is that as American Red Cross disaster and emergency services volunteers face adversity, they will experience a positive appraisal process of the situation and attribute significance to their disaster and emergency services work. This growth through adversity, as described by Joseph and Linley (2005) can affect the retention of the disaster and emergency service volunteers.

The broaden-and-build theory of positive emotions (Fredrickson, 1998, 2001) combined with the organismic valuing theory of growth through adversity (Joseph & Linley, 2005) created the optimal research foundation for driving the hypotheses for this study. This combination of theories supported the primary purpose of this current study, which was to assess the factors of positive emotions, resiliency, coping, and post-

traumatic growth and the relationship these factors have on the retention of disaster and emergency services volunteers.

Nature of the Study

This study used a nonexperimental quantitative survey research methodology to examine the predictive relationship between positive emotions, resiliency, coping, and post-traumatic growth and the retention of American Red Cross disaster and emergency services volunteers (independent variables and dependent variable respectively). For this study, the Differential Emotions Scale-IV-A (DES-IV-A; Izard, 1993) measured positive emotions. The Ego Resiliency Scale (ERS; Block & Kremen, 1996) measured resiliency. The Rhode Island Stress and Coping Inventory (RISCI; Fava, Ruggiero, & Grimley, 1998), measured coping. The Post-Traumatic Growth Inventory (PTGI; Tedeschi, & Calhoun (1996), and the Changes in Outlook Questionnaire-Short Form (CiOQ-S; Joseph, Linley, Shevlin, Goodfellow, Butler, 2006), measured post-traumatic growth.

The population used for this study consisted of a convenience sample of American Red Cross disaster and emergency services volunteers. The Pearson Product Moment correlation (Arya & Davisdson, 2015; Eggleston, 2015), and multiple regression (Cohen, Cohen, West, & Aiken, 2003), analyzed the predictive relationship between positive emotions, resiliency, coping, and post-traumatic growth and retention of American Red Cross disaster and emergency services volunteers. Independent samples *t*-tests (Andrykowski, Steffens, Bush, & Tucker, 2015; Grace, Kinsella, Muldoon, & Fortune, 2015) were used to compare the means of two groups. Precise details provided

in Chapter 3 include the design methodology, data collection, demographics of target population, and the validity and reliability of all instruments.

Operational Definitions

Coping: All of the mechanisms used by individuals to meet a significant threat to their psychological stability and to enable them to function effectively (Hamburg, Hamburg, & de Goza, 1953) as measured by the RISCI (Fava, Ruggerio, & Grimley, 1998).

Deployed American Red Cross disaster and emergency services volunteer: An American Red Cross disaster and emergency services volunteer deployed to at least one natural or man-made disaster from September 1, 2001 until present day (The American National Red Cross, 2016).

Disaster and emergency services work: Emergency services provided during either man-made or natural disaster response work (The American National Red Cross, 2016).

Disaster: A natural or man-made disaster (U.S. Department of Health and Human Services [DHHS], 1999) that has occurred since September 1, 2001, until present day. The list of natural and man-made disasters since September 1, 2001 include the September 11, 2001, terrorist attacks on the United States; Hurricane Isabel (2003); Hurricanes Charley, Frances, Ivan, and Jeanne (2004); Hurricanes Dennis, Katrina, Rita, and Wilma (2005); Hurricanes Gustav, Hanna and Ike (2008); Hurricane Tomas (2010); Hurricane Irene (2011); and Hurricane (aka Superstorm) Sandy (2012). This list of natural and man-made disasters is not exhaustive, since American Red Cross chapters

also work with disasters on local levels, such as floods, fires, weather-related catastrophes, and mass casualty events such as school and public shootings (American National Red Cross, 2016).

Length of service: The length of time the participant has been an American Red Cross disaster and emergency services volunteer (American National Red Cross, 2016).

Positive emotions: Evolved adaptations that function to build lasting resources by producing novel and broad-ranging thoughts and actions that are not critical to one's immediate safety, well-being, or survival (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009), as measured by the DES-IV-A(Izard, 1993).

Post-traumatic growth: Changes that may arise to propel an individual to a higher level of functioning than that which existed prior to the event (Linley & Joseph, 2004), as measured by the PTGI (Tedeschi & Calhoun, 1996), and the CiOQ-S (Joseph et al., 2006).

Resiliency: The capacity to maintain competent functioning in the face of major life stressors (Kaplan, Turner, Norman, & Stillson, 1996), as measured by the ERS (Block & Kremen, 1996).

Retention of disaster and emergency services volunteers: The length of service time (in months) the participant has been an American Red Cross disaster and emergency services volunteer (American National Red Cross, 2016).

Assumptions, Scope, Delimitations, and Limitations

Assumptions

One major assumption for this study was that the variables of positive emotions, resiliency, coping, and post-traumatic growth would predict the retention of American Red Cross disaster and emergency services volunteers (Fredrickson et al., 2003; Linley & Joseph, 2006; McCaslin, Jacobs, Meyer, Metzler, & Marmar, 2005; McCann & Perlman, 1990). The researcher assumed that a percentage of participants would have a history of deployment as an American Red Cross disaster and emergency services volunteer because participant samples were from the local American Red Cross chapters (McCaslin et al., 2005). A researcher assumes that the study sample (in this current study, American Red Cross disaster and emergency services volunteers) is representative of the population to whom the researcher wishes to make inferences, in this case other disaster relief organizations. The researcher assumes that the participants will answer all questions truthfully and that the instruments used will precisely measure what they claim to measure, with the same intensity of reliability and validity found in previous analyses (Fava, Ruggerio, & Grimley, 1998; Joseph et al., 2005; Tedeschi & Calhoun, 1996; Boyle, 1984, and Block & Kremen, 1996).

Another assumption is social desirability. Social desirability "refers to the need for social approval and acceptance and the belief that it can be attained by means of culturally acceptable and appropriate behaviors" (Crowne & Marlowe, 1964, p. 109). The propensity of individuals to present themselves in a positive light, regardless of their authentic feelings about an issue or topic, is a common perception of social desirability.

This propensity is problematic as it can bias the answers of respondents (i.e., to alter the mean levels of the response) and veil the authentic relationships between two or more variables (Ganster, Hennessey & Luthans, 1983).

Scope

Research into the psychological effects of disaster and emergency services work has primarily focused on the negative effects of the disaster and emergency services work (Linley & Joseph, 2006, McCann & Perlman, 1990; McCaslin et al., 2005, etc.). Important to this research project is the inadequate concentration of research literature between the variables of positive emotions, resiliency, coping, and post-traumatic growth and the retention of disaster and emergency services volunteers. This current study proposed that positive emotions, resiliency, coping, and post-traumatic growth would significantly statistically predict the retention of American Red Cross disaster and emergency services volunteers.

Delimitations

The first delimitation for this study was the choice of the problem (Simon, 2011). There were other related problems to research based on American Red Cross disaster and emergency services volunteers, however, I chose to examine specific variables (positive emotions, resiliency, coping, and post-traumatic growth) and retention. A second delimitation was the population I chose for this study. A qualifying participant for this current study is operationally defined as an American Red Cross disaster and emergency services volunteer who has been deployed to at least one disaster (man-made or natural) according the American Red Cross volunteer database. The proposed research population

for this study was American Red Cross disaster and emergency services volunteer workers ages 18 to 80+ in the New York and New England region.

The results of this current study could be generalizable to American Red Cross disaster and emergency services volunteers who (a) are between the ages of 18 and 80+, (b) volunteer in the New York and New England region, and (c) have been deployed to at least one natural or man-made disaster. A third delimitation was the specific theories I adopted for this study. Among the many theories I could have chosen, I decided to use Fredrickson's (1998, 2001) broaden-and-build theory of positive emotions and Joseph and Linley's (2005) organismic valuing theory of growth through adversity

Limitations

Limitations in this current study included the generalizability of the results and self-report response bias. Generalizability is intrinsic in any convenience sample study (Heppner, Kivlighan, & Wampole, 1999). This study was limited to the 'typical' demographic characteristics that define an American Red Cross disaster and emergency services volunteer. Even though I deemed this limitation suitable because of the lack of research into these concepts, I projected that more research is necessary between and within various disaster relief organizations.

Self-report response bias is the research measurement inaccuracy that begins with the respondent (Dodd-McCue & Tartaglia, 2010). Self-report data is the information provided by the individuals who are the study participants. These study participants provide their perceptions about the topic of the research study. In spite of the collection method (i.e., survey, interview, observational narratives, case studies), the belief is that

the data symbolizes an accurate, unbiased indication of what is being measured (Dodd-McCue & Tartaglia, 2010). An example of self-report response bias is critical event and recent timing of event. Equally, critical event and recent timing response biases are associated to the respondents' recall. Critical event response bias takes place when a dramatic event elicits a greater influence in the evaluation than routinely transpiring events. Recent timing response bias occurs when the respondent grants events or information occurring more recently with more weight than events or information occurring in the more distant past (Dodd-McCue & Tartaglia, 2010). In this study, self-report response bias was a limitation due to the reoccurring deployment of disaster and emergency services volunteers.

Significance of the Study

More research is necessary to understand the effects that positive emotions, resiliency, coping, and post-traumatic growth have on the retention of American Red Cross disaster and emergency services volunteers. Linley and Joseph (2006) recommended that further research into the recruitment and retention of American Red Cross disaster and emergency services volunteers would assist the American Red Cross in better understanding how to care for their disaster and emergency services volunteers. Brants (2014) recommended that further research on volunteer disaster responders at each level within the disaster services framework would provide more clarity and be more representative of this population of volunteers. Lastly, future research should investigate disaster responders who decide to stop volunteering along with those who stay to determine what factors affect longevity (Brants, 2014). This current study added to the

paucity of research conducted on American Red Cross disaster and emergency services volunteers, specifically in regards to positive emotions, resiliency, coping, and post-traumatic growth and the predictive effects on the retention of said disaster and emergency services volunteers.

Social Change

The results of this current study improved present knowledge by examining whether positive emotions (Izard, 1993), resiliency (Block & Kremen, 1996), coping (Fava, Ruggiero, & Grimley, 1998), and post-traumatic growth (Tedeschi, & Calhoun, 1996; Joseph et al., 2006) predicted the retention of American Red Cross disaster and emergency services volunteers. The majority of research on disaster and emergency services volunteers focuses on the negative effects of disaster relief work, with less research on the positive outcomes of such selfless work. The results of this study will promote positive social change in both the individual disaster relief worker and disaster relief organizations.

Regarding the individual disaster and emergency relief worker, the understanding of certain variables involved in their experience will help aid in the recruitment of future volunteers and the retention of current volunteers. Positive emotions help to create stable social resources (Monfort, Stroup, & Waugh, 2015). Resiliency helps disaster and emergency services volunteers adapt to emotionally distressing situations (Riaz et al., 2015). Coping involves giving the disaster and emergency services volunteers a broad range of resources to cope with emotionally distressing situations (Freedy, Saladin, Kilpatrick, Resnick, & Saunders, 1994; Liang, Hayashi, Bennet, Johnson, & Aten, 2015).

In spite of the emotionally distressing situations that disaster and emergency services volunteers face, post-traumatic growth is possible and motivates people in a growthful route (Joseph, 2009).

In this current study, a greater understanding of disaster and emergency services volunteers occurred through accurate, science-based assessments. The results of this study will aid the organization of the American Red Cross as well as other disaster relief organizations. In doing so, academic and scientific examination will continue not only on American Red Cross disaster and emergency services volunteers, but also on a broader scale consisting of various disaster relief organizations (Linley & Joseph, 2006).

Summary

Questions over the nature of the relationship between positive emotions, resiliency, coping, and post-traumatic growth and the retention of American Red Cross disaster and emergency service volunteers continue to be unanswered in today's research. The purpose of this study was to examine whether positive emotions (Izard, 1993), resiliency (Block & Kremen, 1996), coping (Fava et al., 1998), and post-traumatic growth (Tedschi & Calhoun, 1996; Joseph et al., 2006) predict the retention of American Red Cross disaster and emergency services volunteers. If this current study reveals that positive emotions, resiliency, coping, and post-traumatic growth predict greater levels of retention, then the return on a disaster relief organization’s investments in retaining their volunteer base will prove to be invaluable (Schaefer, 2015).

Chapter 2 presents a literature review of the major variables of this current study. The chapter includes theories and literature on positive emotions, resiliency, coping, and

post-traumatic growth. The analysis of literature includes the components of positive emotions, resiliency, coping, and post-traumatic growth as they pertain to disaster and emergency services volunteers. Chapter 3 presents a description of quantitative method procedures for data collection, analysis, and interpretation.

Chapter 2: Literature Review

Introduction

For the past fifteen years, researchers have been testing the theorized correlations between positive emotions, resiliency, and coping (Fredrickson, 1998, Tugade & Fredrickson, 2004), with interest in this subject continuing as of late (Stevens-Watkins, Sharma, Knighton, Oser, & Leukefeld, 2014; Luthar, Lyman, & Crossman, 2014). For the past 9 years, other researchers have been testing the theorized correlations between post-traumatic growth and traumatic events (Joseph & Linley, 2005, King et al., 2006), with interest in this subject continuing as of late (Webster & Deng, 2014; Smith, Samsa, Ganz, & Zimmerman, 2014). Although, prior research has examined, individually, all of the constructs used in this study, there remains a shortage of research that examines a combination of positive emotions, resiliency, coping, and post-traumatic growth and their effects on the retention of American Red Cross disaster and emergency services volunteers.

I examined whether positive emotions, resiliency, coping, and post-traumatic growth predict the retention of American Red Cross disaster and emergency services volunteers. The following chapter provides a detailed summary of the two theories and literature pertinent to the four key constructs in this current study. The literature review concentrated on how positive emotions (Fredrickson, 1998, 2001), resiliency, coping (Block & Block, 1980; Block & Kremen 1996, Lazarus, 1993), and post-traumatic growth through adversity (Joseph & Linley, 2005), were related to the retention of disaster and emergency services volunteers.

Literature Search Strategy

This review involved the use of online library services and direct websites of organizations such as the American Red Cross. Databases searched included: EBSCO and Science Direct databases to conduct an advanced search of subdatabases, which included: (a) PsychInfo, (b) Health and Psychosocial Instruments, (c) MEDLINE, (d) Mental Measurement Yearbook, (e) PsycArticles, (f) SocINDEX, (g) Military and Government Collection, and (h) International Security & Counter Terrorism Reference Center. The keyword combinations used in the literature search included *disaster(s), relief worker(s), disaster and emergency services workers, disaster and emergency services volunteers, disaster work, positive emotions, resiliency, coping, post-traumatic growth, American Red Cross relief workers,* and *volunteerism and retention.* Terms used in addition (and separately) were the measurement descriptors *CiOQ, PTGI, RISCI, ERS*, and *DES,* to collect the most applicable and precise research data possible. The literature for the operationalized variables of interest began in 1998 for *positive emotions, resiliency, coping*, and 2005 for *post-traumatic growth*. By using this period for the literature review, I was able to focus on articles written within the last eighteen years.

Results from the databases produced research on the variables of positive emotions, resiliency, coping, post-traumatic growth, disaster and emergency services workers and/or volunteers. Research included related theories of positive emotions and post-traumatic growth. The literature review incorporated research that both substantiated the current study, as well as research that may not uphold the study. Research actions were aided by the application of the Walden University website library, as well as online

search engines such as Google scholar and information provided on the American Red Cross website (American National Red Cross, 2016).

Positive Emotions

Positive emotions (Fredrickson, 1998) have obtained less research attention (De Rivera, Possell, Verette, & Weiner, 1989) as compared to negative emotions, due to the small number and diffuse emotions that are positive (Ellsworth & Smith, 1988). Nesse's (1990) research within the field of evolutionary psychology expressed that natural selection shapes emotions only for situations that contain threats or opportunities. According to Nesse (1990), negative emotions outnumber positive emotions because there are a larger number of threats in life than opportunities.

In psychological literature, emotions are often viewed as heuristics, or "using experience to learn and improve." (Heuristic, n.d.), that give an individual the tendency to perform particular actions (Frijda, 1986; Oatley & Jenkins, 1996). Fredrickson (1998) proposed a broader, thought-action repertoire model in which positive emotions provoke individuals to abandon time-tested instinctive behavioral patterns and to engage in new, creative, and frequently unscripted courses of thought and action.

In order to create a new and appropriate archetype for examining positive emotions, Fredrickson (1998) proposed a model that would generate nonspecific action tendencies and not automatically generate drives for physical activity. Fredrickson (1998) explained that some positive emotions, such as interest and contentment, create changes in cognitive activity then followed by, if any, changes in physical activity.

The occurrence of positive emotions (Fredrickson, 1998) is vital to humans and adds abundantly (Diener & Larsen, 1993) to the value of people's lives in a positive way (Myers & Diener, 1995). Remarkably, positive emotions can occur at the same time as negative emotions with moderately elevated occurrence, even in the center of individual extensive strain (Moskowitz, Folkman, Collette, & Vittinghoff, 1996; Ong et al., 2006). Positive emotions encourage adaptability of humans in contemplating and solving problems in both theoretical and empirical work (Fredrickson & Branigan, 2005; Isen, Daubman, & Nowicki, 1987).

Positive emotions have been found to offset the physiological effects of negative emotions (Fredrickson & Levenson, 1998; Ong & Allaire, 2005), and ease adaptive coping (Folkman & Moskowitz, 2000, 2004). Positive emotions construct stable social resources (Fredrickson & Branigan, 2005; Keltner & Bonanno, 1997), and generate upward twists of improved well-being (Fredrickson, 2000; Fredrickson & Joiner, 2002). Importantly, these positive emotion resources function as reserves that can be drawn on later to improve the odds of successful coping and survival.

Theoretical Framework

Broaden-and-Build Theory

Fredrickson (1998, 2001) developed the broaden-and-build theory of positive emotions as the basis for comprehending psychological resilience. In order to recover from and find positive meaning in stressful situations, resilient people utilize positive emotions (Fredrickson, 1998). According to Fredrickson (1998), resilient people have the aptitude to promote positive emotions within themselves. Resilient people manage

negative stressors, as well as bring out positive emotions in others around them (Fredrickson, 1998). Research (Bonanno, 2004; Fredrickson, 1998, 2001; Tugade & Fredrickson, 2004) has uncovered that positive emotions can be considered a feature of resilience that helps increase an individual's coping abilities during unfavorable life situations.

Fredrickson (2001) posited that the development of personal and interpersonal reserves requires an understanding and manifestation of positive emotions (Keltner & Bonanno, 1997), in addition to a promotion of individual and distinctive resiliency, and coping, during distressing events (Bonanno, 2004, 2005; Tugade & Fredrickson, 2004). Importantly, these reserves perform as resources obtained to advance the chances of positive managing and subsistence. Understanding resilience in disaster and emergency services volunteers is critical because disaster and emergency services volunteers need to have the skill to rebound after adversity and stress, defend against depression, and maintain their maturity in stressful situations (Fredrickson et al., 2003; Tugade & Fredrickson, 2004; Ong et al., 2006).

Fredrickson's (2004) broaden-and-build theory of positive emotions depicts the structure and purpose of a subcategory of positive emotions containing joy, interest, contentment, and love. A key proposal involves the results of these widened beliefs: By expanding one's brief thought-action selection, whether via performance, discovery or comparable actions, positive emotions endorse detection of new and original deeds, thoughts, and shared connections, which results in building the individual's reserves, varying from physical and cerebral reserves, to societal and emotional reserves.

In 2001, a major earthquake hit El Salvador killing 1,100 people. In a 3-month postearthquake study conducted by Vazquez, Cervellon, Perez-Sales, Vidales, & Garborit, (2005), interviewed a random sample of $N = 115$ victims of the earthquake, stratified by sex, group, and shelter ($N = 63$, Cafetalón shelter, $N = 52$, Santa Gertrudis shelter). The participants' ages ranged from 18 to 72. Forty-two percent of the participants were men ($M = 37:7$, $S.D. = 17:3$). Despite all the adverse and painful circumstances, 72.5% of the refugees could recall some moment of happiness during the 3 months following the earthquake (Vazquez et al., 2005).

As American Red Cross disaster and emergency service volunteers experience positive emotions, they may be able to renovate themselves, develop more creativity, increase their knowledge, increase resiliency, become more socially incorporated, and, overall, healthier individuals (Fredrickson, 2004). Resilient people are capable of bringing forth positive emotions in others, which may help to create an accommodating societal setting that enables survival (Demos, 1989; Werner & Smith, 1992; Kumpfer, 1999). Therefore, the resiliency of an American Red Cross disaster and emergency services volunteer is not only beneficial to the disaster and emergency services volunteer, but for those whom they are helping during a traumatic event.

Growth Through Adversity

In 1996 (Tedeschi & Calhoun) reported that researchers have comprehensively investigated the negative effects of traumatic events. Since then, there has been confirmation in research regarding traumatic events that are able to create numerous destructive physical and psychological results (Lee et al., 2014; Ferry, et al., 2014;

Bisson, 2014). Tedeschi and Calhoun (2004) postulated that individuals might recognize some benefit coming from their battle with tragedies. Tedeschi and Calhoun (2004) identified three expansive categories of apparent benefits from traumatic events: (a) alterations in self-awareness, (b) modifications in personal relationships, and (c) a transformation in their viewpoint of life.

Joseph and Linley (2005) explained that although there are several theories that focus on growth through adversity, such theories are more of an explanatory nature rather than a widespread description of growth development. According to Joseph & Linley (2005), growth embodies positive changes in how people hold in high regard their relationships with other people, in their self-perceptions, and in their life philosophy. The theory (Joseph & Linley, 2005) must be able to explain this system of changes in meaning regarding the self, others, and the world. Joseph and Linley (2005) stated that the growth through adversity theory must be able to clarify individual differences in growth.

Growth has been detailed in people who have experienced a wide range of stressful and traumatic events (Joseph & Linley, 2005). Although some people show growth, others may not and be negatively affected through adversity. People who have experienced stressful and traumatic events (Joseph & Linley, 2005) may also experience symptoms of depression, anxiety, and posttraumatic stress disorder (PTSD). Thus, a new theory of growth through adversity (Joseph & Linley, 2005) must try to explain why some people show positive changes while others are negatively affected, and why some people show both positive and negative changes. Joseph and Linley (2005) stated that the

growth through adversity theory should be able to contain existing research findings on the correlates and predictors of growth. The organismic valuing theory of growth through adversity (Joseph & Linley, 2005) was used as a part of the framework for this study.

Organismic Valuing Theory of Growth through Adversity

The organismic valuing theory (OVT) through adversity begins from the assumptions of prior psychological theories on post-traumatic growth (e.g., Tedeschi & Calhoun, 2006; O'Leary & Ickovics, 1995; Park, 1998; Thompson, 1985). The OVT extracts greatly from the work of psychosocial theorists, such as Lepore's (2001) social cognitive processing theory. However, after assessing presented formulations, Joseph and Linley (2005) disputed that prior theories are descriptive and made no effort to address the full range of human experience when faced with adversity, focusing either on the development of PTSD or growth (Scrignaro, Barni, & Magrin, 2011). Therefore, Joseph and Linley (2005) proposed a novel social-cognitive model of growth that is explanatory and supplies a comprehensive theoretical framework that, in accounting for growth, is able to account for the PTSD trend (Scrignaro et al., 2011).

Over the past ten years, the subject of growth after adversity (Joseph, 2009) has become the focal point for empirical work. There has been an increase in literature documenting positive changes after a broad variety of taxing and traumatic events (Linley & Joseph, 2004), an increase in measurement literature (Joseph & Linley, 2005), and considerable progress in theory (Joseph & Linley, 2006). The organismic valuing theory of growth through adversity (Joseph & Linley, 2005) is a thorough and stylish theoretical analysis of growth through adversity. The organismic valuing process (OVP) discusses

one's instinctive aptitude to distinguish what is significant and what is necessary for a satisfying existence. The underpinning of the theory is that people are motivated to move in a growthful route (Joseph, 2009). This theory of growth just might be used to answer the question, "How can disaster and emergency services volunteers see death and destruction, yet have the desire to continue to help those affected by tragedy?"

The organismic valuing theory of growth through adversity (Joseph & Linley, 2005) reveals how this inherent impetus in the direction of growth brings about the conditions of interference and evasion that are features of cognitive-emotional management post-trauma. Joseph and Linley's (2005) theory presented three likely results of cognitive-emotional processing after a traumatic event: (1) integration, (2) adverse accommodation, and (3) affirmative accommodation. If the social environment is capable of sustaining the positive accommodation development, Joseph and Linley (2005) posits how the organismic valuing process routinely brings about the actualization of affirmative changes in psychological well-being due to the affirmative accommodation of the novel trauma-related evidence.

In the study mentioned above, Vazquez et al. (2005) examined post-traumatic growth. Of the $N = 115$ participants, $N = 76$, reported some kind of positive learning from the traumatic earthquake in 2001. Vazquez et al. (2005) reported post-traumatic growth in nonexclusive categories: growth in personal skills (30.2% of the total sample), valuing human relations to a greater extent (17.3%), existential reflections (12.9%), and instrumental learning (5.2%). Vazquez et al. (2005) discovered that 64% of the

participants whom stated some kind of learning from the earthquake experience, felt more prepared to cope with future traumatic events.

Theoretical Synthesis

Theoretically, links between positive emotions and psychological resilience variables are addressed in Fredrickson's (1998, 2001, 2004) broaden-and-build theory. In times of stress, positive emotions related to resiliency and specific social and psychological resources can improve coping. Fredrickson's (1998, 2001) broaden-and-build theory of positive emotions creates a framework for comprehending psychological resilience. Resilient people employ positive emotions to bounce back from and find positive meaning in stressful experiences. Within the theory of resiliency is the concept of positive emotions, which helps better understand how certain people are better equipped to handle negative stressors. People, who are more resilient than others, have the innate ability to develop positive emotions within themselves to cope with negative situations.

Joseph and Linley (2005), punctuate post-traumatic growth variables through the organismic valuing theory of growth through adversity. Post-traumatic growth variables can be predictors of positive changes in individuals who experience trauma-related events, given the social environment is able to meet the individual's psychological needs for autonomy, competence, and relatedness. The groundwork of the organismic valuing theory of growth through adversity is that people are essentially inspired to move in an evolutionary direction (Joseph, 2009). The organismic valuing process theory speculates that a social environment that is capable of fulfilling the individual's needs for autonomy,

competence, and relatedness will bring about the incidence of a fruitful appraisal processes, in turn assisting positive accommodation and the exploration for meaning as significance. These courses of actions will then lead to superior growth (Joseph & Linley, 2005). Joseph and Linley's (2005) organismic valuing theory of growth through adversity exposed how the inherent momentum toward growth leads to the conditions of intrusion and avoidance that are features of cognitive - emotional processing after trauma. The broaden-and-build theory of positive emotions (Fredrickson, 1998, 2001) combined with the organismic valuing theory of growth through adversity (Joseph & Linley, 2005), creates the optimal research foundation for the hypotheses for this current study. This combination of theories also supports the primary purpose of this study, which is to examine the factors involved in the retention of the American Red Cross disaster and emergency services volunteers.

Resiliency and Coping

Are disaster and emergency services volunteers specially equipped emotionally to handle life and death and come through unaffected by what they witness? Do disaster and emergency services volunteers cope better under stress than the average person? Are disaster and emergency services volunteers more resilient than the average person? Disaster and emergency services work can be exceptionally rewarding, yet at the same time, demanding and stressful (McCaslin et al., 2005). Disaster and emergency services volunteers frequently report positive experiences related to their disaster assignments (Armstrong, Lund, McWright, & Tichenor, 1995; Young, Ford, Ruzek, Friedman, & Gusman, 1998). A 1994 American Red Cross survey denoted that many disaster and

emergency services volunteers felt a sense of achievement and satisfaction in their work and as a result, articulated that they had acquired a new outlook on life and new associations (Morgan, 1994).

Duckworth (1986), Ersland, Weisaeth, and Sund (1989), and Ursano, Fullerton, Kao, and Bhartiya, (1995), acknowledge disaster and emergency services volunteer resilience and well-being following disasters. According to Fredrickson (2013), along with promoting cardiovascular serenity, positive emotions have also been found to assist resilient people to discover positive meaning in difficult life situations (Tugade & Fredrickson, 2004, Study 3). Positive emotions safeguarded against depressive symptoms and promoted post-crisis growth in the aftermath of the September 11, 2001 terrorist attacks (Fredrickson et al., 2003). Positive emotions assist people to recover successfully from stress, both in daily life and during bereavement (Ong et al., 2006).

Block and Block (1980) describe psychological resilience as the capacity to rebound from adverse emotional experiences (Block & Kremen, 1996) and adapting to the altering burdens of demanding encounters (Lazarus, 1993). A combination of various investigative approaches (Block & Kremen, 1996) points to resilient persons as having positive, enthusiastic, and spirited attitudes toward life. Resilient persons are inquisitive and amenable to novel encounters. Resilient persons are depicted by a high-level of positive emotionality (Klohnen, 1996). Kumpfer (1999) stated that resilient individuals actively make advances in their emotional well-being by using positive thoughts to evoke positive emotions. Werner and Smith (1992) suggested using comicality to arouse positive emotions, whereas Demos (1989) and Wolin and Wolin (1993) suggested

techniques for relaxation to induce positive emotions. Resilience is a critical part and a key variable for disaster and emergency services volunteers whom will likely remain volunteers, as well as those whom will be recruited.

Matsen (1994) defined resilience as an arrangement across time, distinguished by useful ensuing adaptation in spite of developmental hazards, severe stressors, or prolonged hardships. Throughout disasters, the safeguarding of coping tactics is extremely valuable. Greene and Greene (2009) suggest that disaster and emergency services volunteers have the ability to cultivate other's aptitude to assess, alter, and control their reasoning and interactive strength to endure peripheral and/or inner stress. Lazarus and Folkman (1984) reported this process involved four steps:

1. Appraising or determining the meaning of an event.
2. Selecting a coping strategy, including an evaluation of one's resources.
3. Carrying out the coping strategy.
4. Evaluating one's coping efforts.

Resilience, viewed from a developmental perspective, is the ability to endure developmental duties despite life-threatening threats. Although research regarding risk and resilience began with the study of at-risk children, a growing body of literature suggests that resilience is a life course phenomenon (Werner & Smith, 1992).

Bonanno's (2008) article challenges earlier views of resilience that claimed resilience either as being an irrational condition, or as a characteristic observed solely in atypical as well as outstanding vigorous individuals. Bonanno (2008) reviewed support that resilience during the trials of loss or possible trauma denotes a clear-cut course

versus that of recovery. Bonanno (2008) believed that resilience is more ordinary than regularly believed, and that there are several and on occasion, unforeseen paths to resilience. Recovery signifies a path in which ordinary functioning briefly gives way to the upper limit or sub-threshold psychopathology (e.g., symptoms of PTSD or depression) generally for an interval of a few months, and subsequently steadily restores to pre-circumstance intensity (Bonanno, 2008). Comparatively, resilience displays the power to preserve an unwavering stability.

Bonanno (2008) compared recovery to resilience and stated that recovering persons often go through sub-threshold indicator levels, whereas resilient individuals may be subjected to transient disturbances in ordinary behaviors (e.g., numerous weeks of irregular anxiety or agitated slumber). Normally resilient persons display a steady course of healthful performance over an interval (Bonanno, Papa, & O'Neill, 2001), and the capability for an abundance of encounters and positive emotions. Bonanno (2008) illustrates in Figure 2, the characteristic resilience and recovery paths, plus chronic and delayed disruptions in functioning. For this current study, Bonanno's (2008) graph would represent American Red Cross disaster and emergency services volunteer resilience as compared to the disruptions they encounter during their deployment.

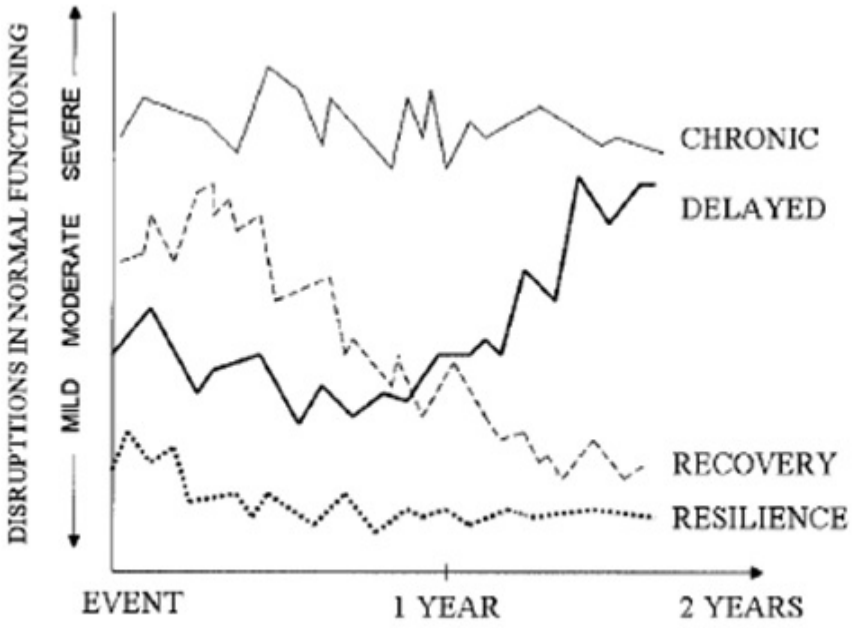

Figure 2. Prototypical patterns of disruption in normal functioning across time following interpersonal loss or potentially traumatic events. From "Loss, Trauma, and Human Resilience," by G.A. Bonanno, 2004, American Psychologist, 59(1), p. 21. Reprinted with permission

Review of Methodology

Self-Report

Del Boca and Noll (2000) posited there has been and increased concession within the previous ten years, in which the reliability and validity of self-report evaluations are more precisely issues of gradation versus unchangeable features of a quantifying tool. Del Boca and Noll (2000) also stated that the assessment of these psychometric characteristics is reliant on the investigators' rationale and the framework wherein the statistics are amassed. .The distinctive advantage of self-report measures includes their accommodation, adjustability, and cost-effectiveness (Del Boca & Noll, 2000). Self-reports are highly convenient and can be connected to the participant via a diversity of

dissemination equipment, including, telephones, computers and sometimes television. Del Boca and Noll (2000) posited, overall, self-disclosure methods deliver soundly truthful approximations with regard to the examined variable.

Convenience Sampling

Convenience sampling is the procedure of obtaining research participants from populations close in proximity or expedient to the investigator while evading the complexity of bona fide arbitrary samples (Kiess, 2002). Grounded on established selection criteria (Heiman, 2002), convenience sampling presupposes that the participant sample be arbitrarily extracted from a specific population (Jaccard & Becker, 2002). American Red Cross disaster and emergency services volunteers were intentionally identified to take full advantage of the potential for participants within this group to have had a history of deployment as disaster and emergency services volunteers.

Quantitative Research Errors

Throughout the research process researchers can generate inadvertent errors (Kiess, 2002). According to Kiess (2002), among the errors researchers can make is inadequate sample size. Also noted as errors, are mistakes in interpretation (Jaccard & Becker, 2002) that decrease external validity because of overgeneralization. Another avenue for error can be conclusions researchers extract from data that apply to the individual measurement of data and not the cumulative measurement of data (Lees & Neufeld, 1994). For example, if a researcher reported on only the individual items scores on the Ego Resiliency Scale (Block & Kremen, 1996), and not the combined data

designed to measure overall resiliency, the researcher could not properly draw conclusions about overall resiliency from the individual item responses.

Alternative Research Methods Considered

Researchers often find the decision to choose between quantitative, qualitative, or mixed-methods research design an arduous task. The selection of design is essential since it will establish the process of collecting data and analysis (Charmaz, 2006; Strauss & Corbin, 1998). According to Bryman and Bell (2007), quantitative research is a research approach whose importance is on quantification in the compilation and analysis of data. The distinction of quantitative research reveals a deductive method to connect theory and research with more prominence on theory testing.

Qualitative research is defined as a research approach that generally puts importance on words (meanings) rather than quantification during the gathering and analysis of data (Keegan, 2009; Remenyi, Williams, & Swartz, 1998; Bryman and Burgess, 1999). The distinction of qualitative research reveals an inductive approach when connecting theory to research, with a prominence on theory creation. Qualitative research accents the necessity for practice and norms that favor an importance on the ways in which individuals decipher their social world and not the natural scientific model. The main reason for not using a qualitative research method for this study was the amount of time needed to interview disaster and emergency services volunteers is not conducive to an expeditious study.

Confronted with the above debate, some scholars (Hammersley, 2008; Kumar, 2012) point out the significance of implementing a mixed methods design as an avenue of

accomplishing the greatest advantages from both research methods. The mixed methods approach is viable because it employs both qualitative and quantitative approaches in a single research. Aside from surmounting the deficits of each method, the mixed methods design is beneficial in that it permits the researcher to choose what is successful at a specific point in time. However, the mixed methods design has its own shortcomings that include the requirement for more time to gather and analyze data. Thus, the quantitative method was chosen as the ideal way to address the problem.

Summary

Research into the psychological effects of disaster and emergency services work has primarily focused on the negative effects of the disaster and emergency services work (Linley & Joseph, 2006, McCann & Perlman, 1990; McCaslin et al., 2005, etc.). Important to this current study is the inadequate concentration of research literature between positive emotions, resiliency, coping, and post-traumatic growth and the retention of disaster and emergency services volunteers. Within the last fifteen years, researchers have begun to examine disaster and emergency services work as it pertains to positive emotions, resiliency, coping (Fredrickson et al., 2003), and post-traumatic growth (Joseph & Linley, 2005). This study proposed that positive emotions, resiliency, coping, and post-traumatic growth might predict the retention of American Red Cross disaster and emergency services volunteers. Chapter 3 is a description of quantitative method procedures used for collecting statistics, analyzing data, and interpretation of data.

Chapter 3: Research Methods

Introduction

Prior research has examined positive emotions (Izard, 1993), resiliency (Block & Kremen, 1996), coping (Fava et al., 2006) and post-traumatic growth (Tedeschi & Calhoun, 1996; Joseph et al., 2005) separately; however, there remains a lack of research that examines a combination of positive emotions, resiliency, coping, and post-traumatic growth and their predictive effects on the retention of American Red Cross disaster and emergency services volunteers. The purpose of this quantitative study was to examine the predictive relationship between positive emotions, resiliency, coping, and post-traumatic growth and the retention of American Red Cross disaster and emergency services volunteers. This chapter presents the methodology through the following sections: (a) methodology, (b) population, (c) sampling and sampling procedures, (d) recruitment procedures, (e) instrumentation and operationalization constructs, (f) data analysis plan including research question and hypotheses, (g) threats to validity, and (h) ethical procedures. The chapter concludes with a summary of the key features of the research design method utilized.

Research Design and Rationale

Independent variables include positive emotions measured by the DES-IV-A; (Izard, 1993); resiliency measured by the ERS; (Block & Kremen, 1996); coping measured by the RISCI; (Fava, Ruggerio, & Grimley, 1998); and post-traumatic growth measured by the PTGI; (Tedeschi & Calhoun, 1996), and the CiOQ-S; (Joseph et al., 2006). The dependent variable is the retention of American Red Cross disaster and

emergency services volunteers as measured by length of service. The gathering of quantitative data was determined to be suitable for the analysis (Babbie, 2014), founded on the nature of the research investigation; a nonexperimental research design (Garber & Hollon, 2015) using a predetermined sample of disaster and emergency services volunteers within the American Red Cross.

The following variables represented the independent variables in this current study: positive emotions, resiliency, coping, and post-traumatic growth. Retention was the dependent variable. The research questions and hypotheses in this study addressed recommendations prepared by researchers to foster deeper understanding of the positive emotions (Fredrickson, 1998), resiliency, coping (Ong et al., 2006), and post-traumatic growth (Linley & Joseph, 2006), and the retention of American Red Cross disaster and emergency services volunteers (Brants, 2014). As Kraemer and Blasey (2015) posited, hypotheses are presumed false until proven "beyond reasonable doubt" (p. 3) through statistical testing of the hypotheses. Still, the most carefully performed research study can lead to untrue hypotheses (Kraemer & Blasey, 2015).

Methodology

Target Population

The current study targeted American Red Cross disaster and emergency services volunteers, ages 18 to 80+. The rationale for choosing this population was based on the need for better understanding of the retention of American Red Cross disaster and emergency services volunteers (Hyde, Dunn, Bax, & Chambers, 2014; Waikayi, Fearon, Morris, & McLaughlin, 2012).

Sampling and Sampling Procedures

Recruitment of participants included all American Red Cross disaster and emergency services volunteers from the Metro New York North Chapter and the Connecticut/Rhode Island Region. Data was collected from disaster and emergency services volunteers who have been deployed to at least one disaster (either natural or man-made). All qualified disaster and emergency services volunteers were to have a good comprehension of the English language. This was necessary due to the validation process for all the instruments used in this study were on North American data and native English language speakers (Izard, 1977; Tedeschi & Calhoun, 1996; Joseph, Williams, & Yule, 1993; Fava et al., 1998; Block & Kremen, 1996). The volunteers completed online consent and confidentiality forms per Institutional Review Board (IRB) protocol. This study involved a nonprobability (convenience) sample. Convenience sampling is common and often a necessary method for recruiting participants (Kiess, 2002; Heiman, 2002). However, a significant criticism regarding convenience sampling is the limitation in generalization and inference to the general population. This lack of generalization results in low external validity of studies (Lund, 2012).

The ability to screen each participant for qualification based on the predetermined sampling structure depicted in the next section was preferred. However, the American Red Cross did not possess a software program to sort their disaster and emergency services volunteers strictly by 'deployment status'. Therefore, as the volunteer completed the demographics questionnaire, their deployment status determined if they were to continue the survey or quit the survey.

The sample size needed to attain a statistical power of .80 at a .05 significance level for multiple regression using three predictors was established to be $N = 76$ participants, and for four predictors, $N = 84$ participants (Cohen, 1988). The adequate sample size for this concentration of power for a nondirectional medium effect at an alpha of .05 was $N = 109$ at a correlational coefficient of .07 (Jaccard & Becker, 2002). Therefore, the sample size for this study of $N = 120$ participants, resulted in a medium effect which is suitable for this study.

Procedures for Recruitment, Participation, and Data Collection

Recruitment

I received permission to conduct this current study from the Manager of Volunteer Resources at the American Red Cross Metro New York North chapter (Appendix C), and from the Director, Volunteer and Youth Engagement at the Connecticut/Rhode Island Region (Appendix D). I created an invitation to participate and with the assistance of those individuals, the invitation to participate was emailed to all of the Metro New York North chapter and Connecticut/Rhode Island Region disaster and emergency services volunteers. All disaster and emergency services volunteers had fair opportunity to participate in the current study. The volunteers needed to: (a) meet the sampling structure criteria, (b) have online access, and (c) have an email account, to complete the survey instruments.

Participation. By completing the online survey (Wright, 2005), each disaster and emergency services volunteer consented to participation in this study. Each disaster and emergency services volunteer received a description of the current study and instructions

for participation and completion of this study. There were no obligatory exit procedures for the volunteers, and volunteers could leave this current study at any point in time, without question.

Demographic Data. I included a demographic questionnaire that the volunteers answered via Survey Monkey (Appendix A). This questionnaire included a set of questions related to age, gender, race, marital status, level of education, employment status, American Red Cross volunteer status and history of deployment. Questions were prepared to generate a continuous variable (i.e., exact age, exact time of deployment, etc.). Data analyses were conducted to determine if the demographic characteristics had any statistically significant effect on the dependent variable. If the data revealed any statistically significant relationships among the demographic characteristics, they would be considered as control variables when investigating the hypotheses.

Data Collection. I collected all data through the SurveyMonkey (2015) software program. Using the SurveyMonkey software program, the disaster and emergency services volunteers were able to review the consent form, which consisted of a description and instructions of this study, and my contact information, and complete the actual survey. I exported the completed surveys data from the SurveyMonkey software program to SPSS 21.0 (IBM Corporation, 2012) for complete data analysis. All raw data scores are anonymous and confidential and will not be shared with the any American Red Cross staff or volunteers. Each instrument used in this current study (DES-IV-A, ERS, RISCI, PTGI, CiOQ-S) is valid and reliable, and thus a pilot study was not considered necessary.

In agreement with the APA Ethics Code 8.02, each participant received an online informed consent document ensuring participants' understanding of the purpose of the research and the procedures. The informed consent explained the anonymity and confidentiality of the participants in the current research study. Online surveys often allow for full anonymity, but this would also require implied consent be used. The consent form for this study was drafted to explain that the participant's completion of the survey indicated their consent. The principles of the informed consent are in accordance with the stipulations of the American Psychological Association (APA; 2002) regarding anonymity, confidentiality, and other concerns of protection related to human research. Participants were given the option to make a copy of the informed consent and the participant debriefing document.

Instrumentation and Operationalization of Constructs

The independent variables (positive emotions, resiliency, coping, and post-traumatic growth) and dependent variable (retention as measured by length of service in months) were measured using valid and reliable standardized instruments, used to measure their respective constructs (Izard, 1977; Block & Kremen, 1996; Fava, Ruggerio, & Grimley, 1998; Tedeschi & Calhoun, 1996, Joseph, Williams, & Yule, 1993). The original authors to use their respective instrument (Appendix D) granted permission.

Positive Emotions. Positive emotions were measured using the Differential Emotions Scale IV-A (DES-IV-A, Izard, 1993). The DES-IV-A is a self-report instrument intended for use in the assessment of an individual's experience of essential

emotions or archetypes of emotions. Initially created as a current "state" measure of one's emotions, the DES (Izard, 1971; Izard, Dougherty, Bloxom, & Kotsch, 1974) instructions permit the identical set of scales to be used in the assessment of emotions felt over a prolonged interval of time. Over the past 40-plus years, the DES (Izard, 1971; Izard et al., 1974) has been evaluated in numerous varieties of validity studies. Exposure of the DES to recurrent experimental factor-analytic studies revealed the emotion factors to be extremely constant. In each of these analyses, the factors acquired related to the theoretically defined factors (Izard, 1971; Izard et al., 1974).

In order to keep the DES scales emotion-specific, the item content was a derivative of cross-cultural research on emotion-expression labeling. For example, the initial items for the sadness scale on the DES-I (the first form of the DES) were established on the verbal labels attached to sadness-expression photographs that had been homogenous in cross-cultural studies of emotion identification (Izard, 1971). Item content was further advanced through factor analysis and other psychometric procedures to make the DES-II (Izard, 1972). Factor analyses of the items of the DES exposed a superior match between a priori and empirical factors (Izard, 1972; Izard et al., 1974).

In later work, the vocabulary of the DES was modified (DES-III), for the greatest range of ages and educational levels (Izard, Libero, Putnam, & Haynes, 1993). Multiple-groups assenting factor analysis supplied support for the ten (10) a priori scales of DES-III: Interest, Joy, Surprise, Sadness, Anger, Disgust, Contempt, Fear, Shame/Shyness, and Guilt (Kotsch, Gerbing, & Schwartz, 1982). Finally, the DES was slightly modified (DES-IV) by creating separate scales for Shame and Shyness, in addition one (1) scale

for Inner-Directed or Self-Hostility (anger, disgust, and contempt directed toward the self) (Izard et al., 1993). Numerous studies have added evidence for the construct validity of the DES scales, including the new scales of the DES-IV (e.g., Blumberg & Izard, 1985, 1986; Fridlund, Schwartz, & Fowler, 1984; Schwartz, 1982).

For this current study, the Differential Emotions Scale-IV-A (Izard et al., 1993) assessed participant's emotions. The DES-IV-A uses a 5-point Likert-type scale ranging from 1 (rarely) to 5 (very often) to determine the participant's rate of occurrence of particular emotional experiences. The DES-IV-A (Izard et al., 1993) is a 36-item questionnaire created to investigate the rate of occurrence with which people experience 12 separate emotions in their everyday life (anger, contempt, disgust, fear, guilt, interest, joy, sadness, self-directed hostility, shame, shyness, and surprise).

Reliability and Validity. In Izard et al. (1993) acceptable reliability was established for both the Positive Emotionality (a = .80) and Negative Emotionality (a = .95) factors (Izard et al., 1993). For this current study, all 36 questions of the DES-IV-A were used and both positive and negative emotionality were assessed. . The DES-IV-A has specific scoring: Positive emotionality is the sum of scores for Interest, Joy and Surprise. Negative emotionality is the sum of the remaining scale scores (DES-IV-A, Izard et al., 1993).

Resiliency. Resiliency was measured using the Ego Resiliency Scale (ERS; Block & Kremen, 1996). Block and Kremen (1996) identified ego-resiliency as trait resilience. Ego-resiliency is the individual ability to self-regulate dynamically and appropriately, which allows highly resilient people to adapt changing circumstances faster. The Ego

Resiliency Scale (Block & Kremen, 1996) was designed to assess "the ability to change from and also return to the individual's characteristic level of ego-control after the temporary, accommodation requiring, stressing influence is no longer acutely present" (Block & Kremen, 1996; p. 351).

Reliability and Validity. In a study lead by Waugh, Fredrickson, & Taylor (2008), Block and Kremen's (1996) Ego Resiliency Scale (ERS) examined trait differences in psychological resilience. Fourteen statements were used to examine the degree to which the participants agreed to a particular characteristic on a scale from 1 ("does not apply at all") to 4 ("applied strongly"). Statement examples include, "I quickly get over and recover from being startled," and "I enjoy dealing with new and unusual situations." The ERS complete 14-item version ($N = 432$) has a test-retest reliability of r =.78. The internal reliability for the 14-item version completed at the experiment was α = .72 ($N = 71$) (Block & Kremen, 1996).

Coping. The Rhode Island Stress and Coping Inventory (RISCI; Fava, Ruggerio, & Grimley, 1998) measured "perceived stress and coping independent of specific stress situations" (p. 601). The Rhode Island Stress and Coping Inventory (RISCI; Fava, et al., 1998), is a 10-item four or 5-point Likert scaled measure that assesses stress and coping. Examples of items are, “I felt there was not enough time to complete my daily tasks” (a stress-related item), and “I had no time to relax” (a coping-related item).

Reliability and Validity. In the initial development of the RISCI, developers used principal components analysis, item analysis, and a measure of internal consistency (Coefficient alpha) to assess the validity of the instrument. Validity analyses found robust

relationships in the predictable directions for both RISCI subscales with the 5-item Mental Health Inventory. The correlations between the MHI-5 (more frequent psychological distress) and the Stress and Coping subscales (more frequent perceived stress and coping) were .63 and ± .60, respectively (Fava, et al., 1998). Further validity analyses reinforced the usefulness of the RISCI in applied research with smokers and enhanced past research findings that triumphant quitters experience less perceived stress and manage better than those whom relapse. Internal consistency analyses results exposed a .85 coefficient alpha for the five stress items and a .87 for the five coping items (Fava et al., 1998).

Post-Traumatic Growth

Post-traumatic growth was assessed using the Post-Traumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996) and the Changes in Outlook Questionnaire-Short Form (CiOQ-S; Joseph et al., 2006). The Post-Traumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996) is a 21-item self-report measure of positive outcomes following traumatic events. The PTGI is scored using a 6-point Likert-format scale (0 = "I did not experience this change," 5 = "I experienced this change to a very great degree"). The range of scores on the PTGI is 0 to 105. There are five subscales: Relating to Others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation of Life. A total score can be obtained by summing the scores across all items, with higher scores reflecting greater levels of PTG (Sheikh & Marotta, 2005).

Prior methodical measures of post-traumatic growth have experienced a relatively short history, but the development of the Posttraumatic Growth Inventory (PTGI;

Tedeschi & Calhoun, 1996) in 1996, helped researchers empirically measure this construct. Tedeschi and Calhoun (1996) researched the association of post-traumatic growth (as measured by the PTGI) and personality variables. During the creation of the PTGI, Tedeschi and Calhoun (1996), expected PTGI should be unrelated to social desirability, moderately and positively correlated with optimism, extraversion, openness, and religious participation, and negatively correlated with neuroticism. Tedeschi and Calhoun (1996) found that the PTGI was positively correlated with optimism, religiosity, extraversion, and openness, but negatively correlated with neuroticism. In this study, it was hypothesized that posttraumatic growth would be positively correlated with the retention of disaster and emergency services volunteers.

Reliability and Validity. The PTGI (Tedeschi & Calhoun, 1996) evaluates levels of post-traumatic growth in adults who have encountered traumatic events. The initial validation sample consisted of 604 undergraduate students (405 women, 199 men; ages 17-25 years) who had experienced a substantial negative life event during the past 5 years (Sheikh & Marotta, 2005). Such life events consisted of events related to bereavement (36%), injury-producing accidents (16%), separation, or divorce of parents (8%), relationship breakup (7%), criminal victimization (5%), academic problems (4%), unwanted pregnancy (2%), and a diversity of other exposures unspecified by Tedeschi and Calhoun (1996).

The authors conveyed the internal consistency of the scores on each subscale to be as follows: Relating to Others (α = .85), New Possibilities (α = .84), Personal Strength (α =.72), Spiritual Change (α = .85), and Appreciation for Life (α = 67) (Sheikh &

Marotta, 2005). In terms of the total PTGI scores, test-retest reliability estimate (over 2 months in a subsample [N = 28] of the original sample) was reported to be .71. Test-retest reliability estimates for the scores on individual subscales ranged from .65 to .74 [although it was not stated in Tedeschi and Calhoun (1996) which alphas represented which components], with the exception of Personal Strength (r = .37) and Appreciation of Life (r = .47), which were below that range (Sheikh & Marotta, 2005).

In a study directed by Brunet, McDonough, Hadd, Crocker, and Sabiston (2010), researchers tested the proposed five-factor structure and invariance of the Posttraumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996) in a sample of physically active breast cancer survivors. Participants (N = 470, *M age* = 57.3, *SD* = 7.8 years) completed the PTGI and a demographic questionnaire. Using maximum likelihood structural equation modeling, the researchers tested the factor structure, factorial invariance, and latent mean invariance of the PTGI.

Preliminary analyses presented acceptable reliability for the PTGI subscales (α < 0.83). Confirmatory factor analysis (CFA) reinforced the five related factors corresponding to: relating to others, new possibilities, personal strength, spiritual change, and appreciation of life (χ (2) (179) = 822.53, *CFI* = 0.97, *NNFI* = 0.96, *SRMR* = 0.05, *RMSEA* = 0.09). Multi-group CFA supported the invariance of the PTGI throughout age groups, treatment type, time since diagnosis, and time since last treatment. These findings provide support for (a) the multidimensional nature and factorial validity of the PTGI and (b) the use of the PTGI in future research examining posttraumatic growth within samples of physically active breast cancer survivors.

The original Changes in Outlook Questionnaire (CiOQ; Joseph, Williams, & Yule, 1993) was the first measure established to assess the positive changes in addition to the negative changes that individuals experience following adversity. Researchers examined the negative and positive effects of a shipping disaster on the survivors of the disaster through open-ended questions (Yule, Hodgkinson, Joseph, Parkes, & Williams, 1990). Respondents wrote a short description of how the disaster altered their outlook on life. From these descriptions, the researchers created a list of items asserting to represent positive and negative changes. Two scales were compiled, an 11-item scale assessing positive changes (e.g., "I value my relationships much more now"), and a 15-item scale assessing negative changes (e.g., "I do not look forward to the future anymore"). The 26-item CiOQ (Joseph et al., 2005) promised to be a useful instrument; however, a shorter measure of change would be practical, particularly to practitioners, researchers, and disaster relief personnel in need of a rapid assessment. Thus in 2006, Joseph et al., developed the Short Form of Changes in Outlook questionnaire, which was used for this current study.

The Short Form of Changes in Outlook (CiOQ-S) is a 10 items instrument consisting of 5 items measuring positive changes (CiOP-S: e.g., “I value my relationships much more now”), and 5 items measuring negative changes (CiON-S: e.g., “I don’t look forward to the future anymore”) (Joseph et al., 2006). The 10-item scale is scored on a six-point Likert-style scale, ranging from strongly disagree (1) to strongly agree (6). The higher the scores on both positive and negative questions, the greater the positive and negative changes are respectively. The initial validation sample consisted of 336 college

students from the University of Leicester and the University of Warwick, whom were recruited as participants in a broader study on the correlates of adversarial growth (Joseph et al., 2006). All 336 participants evaluated a checklist of 14 distressing events (e.g., serious accident, large fire or explosion, violent crime, natural disaster, unwanted sexual experience, military combat) and indicated which events they had experienced during the course of their life (Joseph et al., 2006).

Analyses indicated acceptable internal consistency reliability for both short form subscales. Cronbach's alpha was .78 for Factor 1 (Positive) and .83 for Factor 2 (Negative), and the subscales were uncorrelated ($r = .06$, ns). Coop Short ($M = 19.51$, SD = 5.35) was correlated with the full 11-item Coop ($r = .93$, $p < .001$), and Coin Short ($M = 9.51$, $SD = 4.27$) was correlated with the full 15-item Coin ($r = .89$, $p < .001$) (Joseph et al., 2006). The short Coif revealed two factors comprising positive and negative changes had internal consistency reliability and convergent validity with the full Coif (Joseph et al., 2006).

Data Analyses Plan

A Pearson Product Moment correlation (Arya & Davidson, 2015; Eggleston, 2015) was used to test the first hypothesis, H1: Independent variables, positive emotions, resiliency, coping, and post-traumatic growth levels are significantly correlated with the dependent variable retention, as measured by the length of service. Standard multiple regression analysis (Mystakidou et al., 2015; Gardner, et al., 2015) was used to test the second hypothesis, H2: At least one of the independent variables will significantly predict the dependent variable. Independent samples *t*-tests (Andrykowski et al., 2015; Grace et

al., 2015) to test the third and fourth hypotheses. H3: There are statistically significant mean differences across genders, for all variables, and H4: There is a statistically significant mean difference between at least one of the seven independent variable volunteer factors (direct client contact, take time off, mental health services available, utilization of mental health services, location debriefing, chapter debriefing, and leave family behind) and the dependent variable. Chapter 4 contains a discussion of the results of the data analyses.

Software used for analysis. Data analyses were completed using the statistical analysis computer program SPSS 21.0 (IBM, 2012). All assessments were conducted via SurveyMonkey (2015), which is compatible for all both PC and Mac users. Once all of the data was in the SurveyMonkey program, the data was downloaded and exported all the data into SPSS 21.0.

Data screening. The data were analyzed using using the SPSS 21.0 (IBM, 2012) statistical software package. Data was screened (Tabachnick & Fidell, 2013) for assumption violations of normality (Shapiro-Wilk test, 1965), linearity (scatterplots), and homogeneity of variance (Levene's test, 1960), as well as probable multicollinearity (tolerance statistic > .20) that could confound the data. Missing data was managed using the median replacement technique or individual within-scale imputations (Munro & Connell, 2005).

Research Question and Hypotheses

The primary research question for this quantitative study was, "What is the predictive relationship between the independent variables, positive emotions, resiliency,

coping, and post-traumatic growth, and the dependent variable, the retention of American Red Cross disaster and emergency services volunteers?"

RQ #1: What are the natures of the relationships between the independent variables (positive emotions, resiliency, coping, and post-traumatic growth and the dependent variable (retention) as measured by the length of service?

$H_0$1: There are not statistically significant correlations between the independent variables and the dependent variable.

$H_1$1: There are statistically significant correlations between the independent variables and the dependent variable.

RQ#2: What is the predictive relationship between the independent variables and the dependent variable?

$H_0$2: The independent variables will not statistically predict the dependent variable.

$H_1$2: At least one independent variable will statistically predict the dependent variable.

RQ#3: For all variables, are there statistically significant differences between mean scores based on genders?

$H_0$3: There are no statistically significant differences between mean scores across genders, for all variables.

$H_1$3: There are statistically significant differences between mean scores across gender, for all variables.

RQ#4: Are there statistically significant mean differences for at least one of the seven independent variable volunteer factors (direct client contact, take time off, mental health services available, utilization of mental health services, location debriefing, chapter debriefing, and leave family behind) that occur as a result of the American Red Cross disaster and emergency services experience and the dependent variable (retention)?

$H_0$4: There is not a statistically significant mean difference between at least one of the seven independent variable volunteer factors and the dependent variable.

$H_1$4: There is a statistically significant mean difference between at least one of the seven independent variable volunteer factors and the dependent variable.

Threats to Validity

External Validity

External validity specifies study results that generalize to the population (Heiman, 2002). As researchers interpret results extracted from a convenience sample, Jaccard and Becker (2002) informed researchers to remain mindful of selection criteria and external validity. Kiess (2002) recommended that if an independent variable in a quantitative study had an effect, convenience sampling did not characteristically limit interpretations.

In any convenience sampling design, including purposive sampling, the ability of the researcher to generalize findings is limited (Cook & Campbell, 1979). When random assignment is not used, it is more difficult for the researcher to rule out confounding and extraneous variables (von Wittich & Antonakis, 2011). In this current study, American

Red Cross disaster and emergency services volunteers who took the time to participate in this study may differ from the general target population of all American Red Cross disaster and emergency services volunteers across the United States.

Internal Validity

Internal validity speaks to the validity of the research itself and there many threats to internal validity of a research design (Dorst, 2011; Brewer & Crano, 2014). Some of these threats are history, maturation, testing, instrumentation, selection, mortality, diffusion of treatment and compensatory equalization, rivalry and demoralization (Willcutt et al., 2012). In this current study, American Red Cross disaster and emergency services volunteers who leave the organization or pass away, before they complete their survey, may have threatened internal validity.

Construct Validity

Construct validity refers to how well you translated or transformed a concept, idea, or behavior into a functioning and operating reality, the operationalization (Brewer & Crano, 2014). To substantiate construct validity involves accumulating evidence in six validity types: face validity, content validity, concurrent and predictive validity, and convergent and discriminant validity. Trochim (2006) divided these six types into two categories: translation validity and criterion-related validity. Translation validity considers whether the operationalization mirrors the accurate meaning of the construct (Goodwin, 2010). Criterion-related validity is the amount of correspondence between a test measure and one or more external referents (criteria), typically measured by their correlation (McBurney & White, 2009). For this current study, I relied on the literature,

which identifies the construct validity of the instruments used in assessing the target population, American Red Cross disaster and emergency services volunteers.

Ethical Procedures

The participants for this current study were voluntary, and the option to participate was offered to all American Red Cross disaster and emergency services volunteers. Participants could stop the survey at any time without any repercussions. All data is anonymous and confidential (Babbie, 2014). No personal information, data report files, or individual identifying data (i.e., date of birth, gender, etc.) will be shared with any American Red Cross staff or volunteers.

The time period for data collection was one (1) month from the time the volunteer received their invitation to participate in this study. Two weeks after the initial invitation, a reminder email was sent to all participants, in order to garner as many participants as possible. Due to the slow response by the participants, and after much discussion with my dissertation chair and my American Red Cross contacts, I created a new survey deadline extended to four months. All raw data was stored securely (Briney, 2015) in the method depicted in the data collection section of this chapter, and will be kept for five (5) years unless otherwise stated by Walden University IRB (2012).

According to Kim (2012), the IRB must review the subsequent requirements in order to provide authorization to research: 1) The risks balanced and lessened in relation to the expected benefits to the subjects established on a risk/benefit analysis. 2) The selection of subjects is unbiased. 3) Informed consent is acquired from each possible subject or a legally accountable representative unless relinquished in accord with the law

and guidelines. This should be acknowledged on the consent form. 4) Additional safeguards are necessary when subjects are likely to be susceptible to coercion or unwarranted influence. 5) When collecting data, suitable monitoring and inspection with continuing review should be planned to make certain the safety of the subjects, guard the privacy of participants and to preserve the confidentiality of data.

The function of the IRB is to make sure that the investigator conforms to the protocol and to validate that the trial is essential and that the risk-benefit ratio is adequate by appraising key trial documents to guarantee that the subjects' rights and well-being are protected (Kim, 2012). This current study exhibited marginal risk to research participants. Protection of the participant included conformity with the Ethical Principles of Psychologists and Code of Conduct (APA, 2002), informed consent, supervision on-site, debriefing of participants, overseeing by committee, and IRB review.

Participants had the opportunity to opt out of the current study at any given time. They were under no obligation to participate, nor given any compensation for participation. The design of this study and the process of informed consent explained reasons for possible risks to research participants. The Institutional Review Board (IRB) assembles under federal regulatory authority to safeguard research participants and guarantees procedures conform to congressional law. This study posed minimal risk to the study's participants.

Summary

The purpose of this quantitative study was to examine whether the independent variables of positive emotions, resiliency, coping, and post-traumatic growth were

predictive of the dependent variable of the retention of American Red Cross disaster and emergency services volunteers. Disasters, both natural and man-made are an everyday occurrence somewhere in our world. When disasters strike, who are the people that sacrifice their time and energy to help those in crisis? They are the committed men and women who are the disaster and emergency services volunteers of the numerous disaster relief organizations around the world. Research into the psychological effects of disaster and emergency services work has primarily focused on the negative effects of the disaster and emergency services work (Linley & Joseph, 2006, McCann & Perlman, 1990; McCaslin et al., 2005, etc.).

For this current study, a quantitative cross-sectional survey was a recognized and suitable research method effectively utilized in associated studies (Linley & Joseph, 2006). This current study investigated the relationship the concept of positive emotions has with the retention of disaster and emergency services volunteers, as predicted by the broaden-and-build theory of positive emotions (Fredrickson, 1998). Also included in this current study was the examination of post-traumatic growth through adversity, as presented through Joseph and Linley's (2005) organismic valuing theory of growth through adversity, and its correlation to disaster and emergency services volunteers. Resiliency and coping were also examined as factors involved in the retention of American Red Cross disaster and emergency services volunteers. Expected results included; the variables positive emotions, resiliency, coping, and post-traumatic growth applied statistically significant influence on the retention of American Red Cross disaster and emergency services volunteers, as measured by the length of service.

Chapter 3 presented the methodology for this current study including: the research design and approach, participant sample and statistical power, instrumentation reliability and validity, the research study procedure, data analysis strategy, and ethical measures for participant's rights. Chapter 4 reports data analysis and study results. Chapter 5 consists of study interpretations, conclusions, and recommendations.

Chapter 4: Results

Introduction

This quantitative, cross-sectional design investigation was performed to supply new information about the predictive relationship between positive emotions (Fredrickson, 1998, 2001), resiliency, coping (Block & Block, 1980; Block & Kremen, 1996; Bonanno, 2008), post-traumatic growth (Tedeschi & Calhoun, 1996; Joseph & Linley, 2006) and the retention of American Red Cross disaster and emergency services volunteers. This study used a convenience sample population of American Red Cross disaster and emergency services volunteers from the New York Metro North Chapter and the Connecticut/Rhode Island Region.

This chapter includes the results from the current study's four hypotheses:

1. There are statistically significant correlations between the independent variables and the dependent variable.
2. At least one independent variable will statistically predict the dependent variable.
3. There is statistically significant mean difference between genders, for all variables.
4. There are statistically significant mean differences between at least one of the seven independent variable volunteer factors and the dependent variable.

This chapter commences with a discussion of the data collection process (including data cleaning and missing data analysis), demographics, assessment of the sample, and the results of data analyses. Next, the results of this current study include;

descriptive statistics characterizing the sample, statistical assumptions of the current study, statistical analysis findings of the predictor and outcome variables, tests of the hypotheses through correlation and hierarchical regression, and follow-up analyses. Results are organized into tables where necessary (APA, 2010), to aid in the presentation and clarification of date.

Data Collection

Data were collected using a self-administered, online survey that was completed over a period of four months. The scales included in this current study were: the DES-IV-A; (Izard et al., 1993); the ERS; (Block & Kremen, 1996); the RISCI; (Fava, Ruggerio, & Grimley, 1998); the PTGI; (Tedeschi & Calhoun, 1996), and the CiOQ-S; (Joseph et al., 2006). See Chapter 3 for the psychometric properties for each instrument.

An initial invitation to participate in this current study was e-mailed to American Red Cross disaster and emergency services volunteers from the Metro New York North Chapter and the Connecticut/Rhode Island Region. A total of $N = 1{,}794$ volunteers were invited to participate in this study. From the base of invites, a total of $N = 175$ (9.8% response rate) provided informed consent and participated in the current study. Data was screened for missing data using Little's Missing Completely at Random (MCAR) in SPSS 21 (IBM, 2012); outliers using the Outlier Labeling Technique in SPSS 21 (IBM, 2012); and possible violations of statistical assumptions using Shapiro-Wilk test of normality and Levene's test for homogeneity of variances in SPSS 21 (IBM, 2012), all of which could confound the data (Tabachnick & Fidell, 2013). Among the participants, 55 (31.4%) did not complete the entire survey and left at least one full scale unanswered.

One-hundred twenty (68.6%) completed the entire survey. See Table 1 for sample size and demographic results. Data were collected using SurveyMonkey, Inc. (2015) and analyzed using the Statistical Package for Social Sciences 21.0 (IBM, 2012) software program.

Data Analyses

Based on the theoretical framework of this current study and theoretically driven hypotheses, the following were tested:

RQ#1: What are the natures of the relationships between the independent variables (positive emotions, resiliency, coping, and post-traumatic growth and the dependent variable (retention) as measured by the length of service?

$H_0$1: There are not statistically significant correlations between the independent variables and the dependent variable.

$H_1$1: There are statistically significant correlations between the independent variables and the dependent variable.

RQ#2: What is the predictive relationship between the independent variables and the dependent variable?

$H_0$2: The independent variables will not statistically predict the dependent variable.

$H_1$2: At least one independent variable will statistically predict the dependent variable.

RQ#3: For all variables, are there statistically significant differences between mean scores based on genders?

$H_0$3: There are no statistically significant differences between mean scores across genders, for all variables.

$H_1$3: There are statistically significant differences between mean scores across gender, for all variables.

RQ#4: Are there statistically significant mean differences for at least one of the seven independent variable volunteer factors (direct client contact, take time off, mental health services available, utilization of mental health services, location debriefing, chapter debriefing, and leave family behind) that occur as a result of the American Red Cross disaster and emergency services experience and the dependent variable (retention)?

$H_0$4: There is not a statistically significant mean difference between at least one of the seven independent variable volunteer factors and the dependent variable.

$H_1$4: There is a statistically significant mean difference between at least one of the seven independent variable volunteer factors and the dependent variable. .

Results

Demographic variables consisted of gender, age, race, education, and marital status. The results are presented in Table 1. Overall, of the N = 120 participants, there were n = 63 men (52.5%) and n = 57 women (47.5%). The mean age for the total sample was 58.67 years (SD = 12.63), with the mean age for men being 60.48 (SD = 13.41), and 56.67 (SD = 11.49) for women. Independent group t tests results indicated there were no significant mean differences in gender by age (see Table 1).

Table 1

Demographics by Overall Sample and by Gender

	Overall (N = 120)		Men (n = 63)		Women (n = 57)	
	N	%	*n*	%	*n*	%
Gender						
Men	63	52.5				
Women	57	47.5				
Age						
Mean	58.67		60.48		56.67	
Minimum	22		24		22	
Maximum	94		94		76	
Education						
Some High School	1	.8	1	1.6	0	0
High School Dipl/Equiv	5	4.2	3	4.8	2	3.5
Some College	11	9.2	4	6.3	7	12.3
Associate Degree	8	6.7	4	6.3	4	7.0
Bachelor Degree	33	27.5	11	17.5	24	42.1
Graduate Degree	62	51.7	40	63.5	20	35.1
Total	120	100.0	63	100.0	57	100.0
Race						
Asian	0	0	0	0	0	0
African American	4	3.3	3	4.8	1	1.8
Caucasian	106	88.3	55	87.3	51	89.4
Hispanic	4	3.3	1	1.6	3	5.3
Native American	4	3.3	4	6.3	0	0
Other	2	2.8	0	0	2	3.5
Total	120	100.0	63	100.0	57	100.0
Marital Status						
Single/Never Married	15	12.5	5	7.9	10	17.5
Married	89	74.2	54	85.7	35	61.4
Divorced	11	9.2	2	3.2	9	15.8
Widow/Widower	3	2.5	1	1.6	2	3.5
Cohabitating	1	.8	0	0	1	1.8
Other	1	.8	1	1.6	0	0
Total	120	100.0	63	100.0	57	100.0

The majority of participants *n* = 62 (51.7%) have achieved a graduate degree level of education, followed by those who received a bachelor's degree, *n* = 33 (27.5%). The remainder of the participants indicated: some college (9.2%), associate degree (6.7%), high school diploma or equivalent (4.2%), and some high school (.8%).When examining race, *n* = 106 indicated Caucasian (88.3%). For a comparison, demographics were obtained from the American Red Cross chapters used in this current study: (a) Metro New York North American Red Cross chapter: Caucasian *n* = 532 (50%), male *n* = 258 (24%), female *n* = 498 (4%); and (b) Connecticut/Rhode Island Region (two chapters): Caucasian *n* = 1,877 (64%), male *n* = 879 (30%), female *n* = 1,717 (58%). A majority of the participants were married (74.2%), male (85.7%) and female (61.4%). Other demographics included, employment status, in which *n* = 47 (39.2%) participants reported being retired, *n* = 48 (40%) work full-time, *n* = 12 (10%) work part-time, and *n* = 7 (5.8%) are unemployed. Participants reported if they held any professional licenses and among the responses, *n* = 10 reported being licensed in the mental health field (i.e., LCSW, LPC, etc.), *n* = 4 reported being in the EMT field, and *n* = 2 reported being a medical professional.

Volunteerism Career Demographics

Demographics regarding the participants American Red Cross career included, most recent date for response to a disaster, and length of service in the American Red Cross. The most recent response date was 12/01/2015, and the oldest response date was 06/27/2005. The mean for length of service was 112.04 months, the minimum was 1 month, and the maximum was 516 months. Regarding gender and length of service, the

mean for men was 112.56 months (*SD* = 102.46), the mean for women was 111.48 months (*SD* = 85.69).

Participants reported that *n* = 19 (16%) had to take time off from work in order to participate in their most recent disaster response. Participants reported that *n* = 99 (83%) had direct contact with clients during their most recent disaster response. In regard to whether mental health services were available to participants during the most recent disaster response, *n* = 71 (59.2%) stated "Yes" there were mental health services available at their most recent disaster response, however, *n* = 49 (40.8%) stated "No" there were no mental health services available at their most recent disaster response. When asked if they utilized the mental health services available to them at their most recent disaster response, *n* = 101 (84.2%) reported "No," and *n* = 19 (15.8%) reported "Yes." When asked if there was a debriefing at the location of their most recent disaster response, *n* = 98 (81.7%) reported "No," while *n* = 22 (18.3%) reported "Yes." When asked if there was a debriefing at their local chapter after their most recent disaster response, *n* = 96 (80%) reported "No," while *n* = 24 (20%) reported "Yes."

The survey instrument designed for this current study was composed of five scales that have been statistically validated and established in the literature, as discussed in Chapter 3. The five scales are as follows: 1) Differential Emotions Scale-IV-A (DES-IV-A; Izard, 1993) measured positive emotions; 2) Ego Resiliency Scale (ERS; Block & Kremen, 1996) measured resiliency; 3) Rhode Island Stress and Coping Inventory (RISCI; Fava, Ruggiero, & Grimley, 1998), measured coping; 4) Post-Traumatic Growth Inventory (PTGI; Tedeschi, & Calhoun (1996); and 5) Changes in Outlook

Questionnaire-Short Form (CiOQ-S; Joseph et al., 2006), measured post-traumatic growth.

All scales had distribution characteristics that were acceptable with respect to skewness (< 1) except for the CiOQ-Neg overall scores and for both men and women. All scales had distribution characteristics that were acceptable with respect to kurtosis (< 2), except for the DES-IV-A-Pos overall scores and for men, the ERS overall scores and for men, the RISCI-Coping overall scores and for men, the CiOQ-Pos for women, and CiOQ-Neg overall scores and for both men and women. According to Tabachnick and Fidell (2013) the underestimates of variances associated with positive kurtosis diminishes with samples of 100 or more. For this study, a visual inspection of histograms revealed normal distributions for each variable.

Table 2 presents descriptive statistics of central tendency, variability, distribution, and reliability using Cronbach's alpha (α) for all scales and all scales by gender. Cronbach's alpha reliability coefficient generally ranges between 0 and 1 (Chou, et al., 2015). The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale. George and Mallery (2003) provide the following rules of thumb: "_ > .9 – Excellent, _ > .8 – Good, _ > .7 – Acceptable, _ > .6 – Questionable, _ > .5 – Poor, and_ < .5 – Unacceptable" (p. 231).

Table 2

Central Tendency, Standard Deviation, Skewness, Kurtosis, and Coefficient Alpha (α) by Overall Sample and Gender Subsample

Scale	Mean	Median	Std. Dev.	Skewness	Kurtosis	Overall α
DES-IV-A Positive Emotions						.74
Overall	27.33	28.00	3.59	-.97	2.42	
Men	26.73	27.00	3.96	-1.05	2.65	
Women	27.98	28.00	3.01	-.40	-.49	
DES-IV-A Negative Emotions						.93
Overall	48.46	48.50	12.75	.22	-.74	
Men	48.37	49.00	13.34	.17	-1.06	
Women	48.56	48.00	12.17	.32	-.24	
ERS						.82
Overall	46.88	47.50	5.45	-1.47	6.29	
Men	46.05	47.00	6.13	-1.72	6.79	
Women	47.79	48.00	4.46	-.26	-.35	
PGTI						.94
Overall	30.87	31.00	12.87	.25	-.74	
Men	28.25	25.00	12.94	.55	-.39	
Women	33.75	36.00	12.25	-.01	-.70	
RISCI Stress						.73
Overall	12.07	12.00	2.71	-.04	.42	
Men	11.65	12.00	2.62	-.22	.81	
Women	12.53	12.00	2.76	.08	.03	
RISCI Coping						.85
Overall	21.33	21.00	2.46	-2.32	14.99	
Men	21.52	22.00	2.90	-3.04	16.20	
Women	21.12	20.00	1.87	.60	-.48	
CiOQ-S Positive Changes						.85
Overall	22.48	24.00	5.47	-1.05	.83	
Men	20.46	21.00	5.60	-.88	.08	
Women	24.72	25.00	4.38	-1.41	3.14	
CiOQ-S Negative Changes						.80
Overall	7.98	7.00	3.26	1.58	3.09	
Men	7.89	7.00	3.09	1.27	2.33	
Women	8.07	7.00	3.47	1.84	3.70	

Correlational Analyses

Pearson Product-Moment correlations (Arya & Davidson, 2015; Eggleston, 2015) were used to examine the correlation between the scales, overall, and by gender, and the results are reported in Table 3. The magnitude of the Pearson correlation coefficient determines the strength of a linear association between variables and is denoted by *r*. Cohen (1988) and Jackson (2015) provided guidelines for correlational strength between variables with a small correlation as, $0.1 < |r| < .3$, a medium/moderate correlation as $.3 < |r| < .5$, and a large/strong correlations as $|r| > .5$. There are five assumptions that were made in this study with respect to Pearson's correlation (Laerd, 2016):

1. The variables were either interval or ratio measurements. Examples of variables that meet this criterion include revision time (measured in hours).
2. The variables were normally distributed. This was accomplished by using the Shapiro-Wilk test (1965) in SPSS.
3. There was a linear relationship between the variables. This was accomplished by using scatterplots in SPSS.
4. Outliers were kept to a minimum or were removed entirely. This was accomplished by using scatterplots in SPSS.
5. There was homoscedasticity of the data. This was accomplished by using scatterplots in SPSS.

Results indicated that overall scores on the Differential Emotions Scale-IV-A-Positive Emotions (DES; Izard, 1993) were slightly positively, significantly associated with the Rhode Island Stress and Coping Inventory-Coping (RISCI; Fava et al., 1998) (*r*

= .28, $p < .01$). The DES-Positive Emotions was moderately positively and significantly associated with the Changes in Outlook Questionnaire-Short form-Positive Changes (CiOQ-S; Joseph et al. 2006) ($r = .48$, $p < .01$). The DES-Negative Emotions was moderately positively associated with the Rhode Island Stress and Coping Inventory-Stress (RISCI; Fava et al., 1998), which measures stress, ($r = .42$, $p < .01$). The DES-Negative Emotions was also moderately positively associated with the CiOQ-S-Negative, ($r = .62$, $p < .01$).

Overall scores on the Ego Resiliency Scale (ERS; Block & Kremen, 1996) were moderately positively associated with the Differential Emotions Scale-IV-A-Positive Emotions (DES; Izard, 1993) ($r = .39$, $p < .01$). The ERS was moderately and significantly, positively associated with the Rhode Island Stress and Coping Inventory-Coping (RISCI; Fava, Ruggiero, & Grimley, 1998), which measures coping, ($r = .58$, $p < .01$). The ERS was slightly significantly and positively associated with the Changes in Outlook Questionnaire-Short form-Positive Changes (CiOQ-S; Joseph et al., 2006) ($r = .28$, $p < .01$). Overall scores on the Post Traumatic Growth Inventory (PTGI; Tedeschi & Calhoun, 1996) and the CiOQ-Short form-Positive Changes were moderately and significantly, positively associated ($r = .53$, $p < .01$), which is consistent with previous research.

A Pearson Product Moment correlation was performed on all scales, overall and by gender, to determine the relationship between the independent variables, positive emotions, resiliency, coping and post-traumatic growth and the dependent variable, retention, as measured by the volunteer's length of service. Three of the participants did

not answer the "Length of Service" question, therefore, *N* = 117 for the following correlations.

Table 3

Pearson Correlations of Scales by Overall and Gender

	DES-IV-A PE/NE	ERS	PTGI	RISCI Stress/Coping	CiOQ-S PC/NC	Length of Service (*N* = 117)
Overall (*N* = 117)						
1. DES-IV-A PE						-.05
2. DES-IV-A NE	.06					-.03
3. ERS	.39**/-.20*					.04
4. PTGI	1.19/.09	.09				-.05
5. RISCI Stress	.18/.42**	-.15	.92			-.02
6. RISCI Coping	.26**/-.20*	.58**	-.04	-.16		.08
7. CiOQ-S PC	.48**/.05	.28**	.53**	.15/.12		-.12
8. CiOQ-S NC	-.10/.62**	-.23*	.16	.22*/-.12	.08	-.01
Men (*N* = 61)						
1. DES-IV-A PE						-.03
2. DES-IV-A NE	.02					-.04
3. ERS	.51**/-.20					.11
4. PTGI	.07/.29*	.22				.09
5. RISCI Stress	.14/.46**	-.11	1.02			.08
6. RISCI Coping	.44**/-.12	.69**	-.17	.22		.06
7. CiOQ-S PC	.51**/.14	.25*	.47**	.17/.14		.09
8. CiOQ-S NC	-.08/.58**	-.27*	.35**	.29*/-.15	.24	.00
Women (*N* = 56)						
1. DES-IV-A PE						-.07
2. DES-IV-A NE	.14					-.02
3. ERS	.10/-.20					-.07
4. PTGI	.10/-.16	.12				-.24
5. RISCI Stress	.18/.37**	-.28*	.01			-.15
6. RISCI Coping	-.08/-.35**	-.40**	.23	-.45**		.13
7. CiOQ-S PC	.35**/-.07	.21	.21	-.00/.23		-.17
8. CiOQ-S NC	-.16/.67**	-.22	-.22	.14/-.78	-.14	-.01

Note: * p < .05; ** p < .01. *DES-IV-A PE, measures Positive Emotions; DES-IV-A NE, measures Negative Emotions, RISCI Stress, measures Stress; RISCI Coping, measures Coping; CiOQ PC, measures Positive Changes; CiOQ NC, measures Negative Changes*.

The first hypothesis stated that there would be a statistically significant correlation between the independent variables (positive emotions, resiliency, coping, post-traumatic growth) and retention. The results of the first hypothesis revealed, that there was not a significant correlation between the independent variables and retention, therefore, length of service was not a proxy for retention. Length of service was also not significant for the independent variables by gender. It was posited that the scales used in this study would be correlated with retention, however, none of the five scales used in this current study were related to retention, especially long-term retention.

Multiple Regression Analysis

Standard multiple linear regression analyses were performed to test the second hypothesis. The second hypothesis stated that at least one independent variable would be a statistical predictor of the dependent variable. See Table 4 for the non-standardized regression coefficients (B), standardized beta weights (β), Multiple R, *r*-squared, adjusted *r*-squared and *p* values, overall and by gender.

There are eight assumptions that were made in this study with respect to multiple regression analyses (Laerd, 2016):

1. The dependent variable was measured on a continuous scale (i.e., an interval or ratio variable). Examples of variables that meet this criterion include revision time (measured in hours).
2. There were two or more independent variables, which were either continuous (i.e., an interval or ratio variable) or categorical (i.e., an ordinal or nominal

variable). Examples of nominal variables include gender (e.g., two groups: male and female).

3. There was independence of observations (i.e., independence of residuals). This was accomplished by using the Durbin-Watson (1950, 1951) in SPSS.
4. There was a linear relationship between (a) the dependent variable and each of the independent variables, and (b) the dependent variable and the independent variables collectively. This was accomplished through scatterplots in SPSS.
5. There was homoscedasticity of residuals (equal error variances) equal for all values of the predicted dependent variable (i.e., the variances along the line of best fit remain similar as you move along the line).
6. There was no multicollinarity within the independent variables. SPSS was used to detect for multicollinearity through an inspection of correlation coefficients and Tolerance/VIF values.
7. There were no outliers. SPSS was used to detect for outliers through an inspection using casewise diagnostics and studentized deleted residuals.
8. The residuals were normally distributed. SPSS was used to detect the normality of the residuals through the inspection of a histogram with superimposed on a normal curve and a P-P Plot.

Table 4

Standardized Multiple Regression of DES-IV-A, ERS, RISCI, PTGI, CiOQ-S on Length of Service (LOS) Overall and by Gender

	Non-standardized coefficients B	Standard Error	Standardized coefficients β	Sig *p*
Overall (*N* = 117)				
(constant)	80.14	113.85		.48
1. DES-IV-A PE	-2.48	3.19	-.09	.44
2. DES-IV-A NE	-.13	.99	-.02	.90
3. ERS	.55	2.25	.03	.81
4. PTGI	-.43	.85	-.06	.61
5. RISCI Stress	.57	3.80	.02	.88
6. RISCI Coping	3.12	4.66	.08	.50
7. CiOQ-S PC	.70	2.27	.04	.76
8. CiOQ-S NC	.46	3.72	.02	.90
Men (*N* = 61)				
(constant)	18.13	144.45		.90
1. DES-IV-A PE	-4.93	4.72	-.19	.30
2. DES-IV-A NE	-.86	1.39	-.11	.54
3. ERS	3.20	3.62	.19	.38
4. PTGI	.59	1.33	.08	.66
5. RISCI Stress	6.23	6.16	.16	.32
6. RISCI Coping	-.14	6.99	-.00	.98
7. CiOQ-S PC	1.55	3.41	.08	.65
8. CiOQ-S NC	.36	6.06	.01	.95
Women (*N* = 56)				
(constant)	153.13	233.00		.51
1. DES-IV-A PE	.39	4.52	.01	.93
2. DES-IV-A NE	.69	1.58	.10	.67
3. ERS	-3.30	3.04	-.17	.28
4. PTGI	-1.62	1.19	-.23	.18
5. RISCI Stress	-3.58	5.14	-.12	.49
6. RISCI Coping	10.56	7.95	.23	.19
7. CiOQ-S PC	-1.27	3.50	-.07	.72
8. CiOQ-S NC	-2.44	5.15	-.10	.64

Note: p < .001; *DES-IV-A PE, measures Positive Emotions; DES-IV-A NE, measures Negative Emotions, RISCI Stress, measures Stress; RISCI Coping, measures Coping; CiOQ PC, measures Positive Changes; CiOQ NC, measures Negative Changes*.

Three separate regression analyses were performed. The first regression analysis was for the overall scales. I then ran a separate regression analysis for men and women. Results for the regression analysis on overall scales (R = .12) was not statistically significant, F (8, 116) = .20, p = .99. Results for men (R = .24) was not statistically significant, F (8, 60) = .40, p = .91. The regression analysis results for women (R = .35) was not statistically significant, F (8, 55) = .83, p = .58. Results from this study concur with research conducted by Tugade and Fredrickson (2004) who found no gender differences in scores of resilience.

Independent-Samples *t*-tests

The more tests you conduct at α = .05, the more likely you are to claim you have a significant result when you do not (i.e., a Type I error). To account for the possibility of inflation of Type I errors, I used a familywise corrected value of p = .007 (.05/7). Independent *t*-tests were conducted to determine whether there was a statistically significant difference between the means in two unrelated groups, men and women. The third hypothesis stated there were statistically significant mean differences in scores across genders for all variables. Familywise corrected (.05/7) independent-samples *t*-test was conducted to assess mean differences. The results indicated there was a statistically significant mean difference in gender on one of the five scales, as women scored higher on positive changes post-trauma.

The fourth hypothesis stated there is statistically a significant mean difference between at least one of the seven independent variable volunteer factors (direct client contact, take time off, mental health services available, utilization of mental health

services, location debriefing, chapter debriefing, and leave family behind) and the dependent variable, retention. Familywise corrected (.05/7) independent-samples *t*-tests were conducted to assess mean differences. For each of the seven independent variable volunteer factors equal variances were assumed. Additionally, the assumption of homogeneity of variances was tested and satisfied via Levene's *F* Test, $F(118) = 3.18$, $p = .52$. See Table 5 for the individual, independent-samples *t*-test results.

Table 5

Independent-Samples t *test of "Debriefing at Disaster Location" and DES-IV-A, ERS, RISCI, PTGI, CiOQ-S on Length of Service (LOS)*

	Yes Debriefing		No Debriefing		95% CI for Mean Difference		
	M	*SD*	*M*	*SD*		*t*	*p*
1. DES-IV-A PE	28.83	3.47	26.95	3.47	0.30, 3.48	2.35	0.021
2. DES-IV-A NE	44.29	13.47	49.50	12.41	-10.91, .50	-1.81	0.073
3. ERS	49.42	4.92	46.24	12.41	0.77, 5.58	2.62	0.010
4. RISCI-Coping	22.75	1.94	20.98	2.46	0.70, 2.84	3.28	0.001*
5. RISCI-Stress	11.13	3.27	12.30	2.52	-2.39, 0.04	-1.92	0.057
6. PTGI	33.96	15.24	30.10	12.17	-1.93, 9.66	1.32	0.189
7. CiOQ-S PC	23.88	4.18	22.14	5.72	-0.72, 4.20	1.40	0.165
8. CiOQ-S NC	7.33	2.70	8.14	3.38	-2.27, 0.67	-1.08	0.283

Note: * $p < .007$ (.05/7) Familywise corrected

Of the seven individual independent-samples *t*-tests, there was a statistically significant difference in scores on one of the seven independent variable volunteer factors and the dependent variable, retention. The factor which was statistically significant was,

"During your most recent American Red Cross disaster and emergency services "response and participation in" a disaster, did you receive a 'formal' debriefing at your disaster location? ('Formal' defined as meeting with an American Red Cross Disaster Mental Health worker)."

Summary

For this study, $N = 120$ American Red Cross disaster and emergency services volunteers participated in this study over a four-month period. Data was collected as participants consented and responded to an online survey via SurveyMonkey (SurveyMonkey, Inc., 2015). The first hypothesis stated there was a statistically significant correlation (Arya & Davidson, 2015; Eggleston, 2015) between the independent variables (positive emotions, resiliency, coping, post-traumatic growth) and retention. Results indicated there were no statistically significant correlations between the independent variables and retention. The second hypothesis stated at least one independent variable would statistically predict (Cohen et al., 2003) the dependent variable. Results indicated that none of the independent variables (positive emotions, resiliency, coping, post-traumatic growth) were statistically significant with the dependent variable retention.

The third hypothesis stated there were statistically significant mean differences (Hedges & Olkin, 2014) between genders, for all variables. Results indicated that women scored higher on post-traumatic growth and positive changes post-trauma. The fourth hypothesis stated there were statistically significant mean differences (Hedges & Olkin, 2014) between at least one of the seven independent variable volunteer factors and the

retention. Results indicated that only a 'debriefing at disaster location' revealed statistically significant mean differences when examining retention. In Chapter 5, I discuss the findings, recommendations for future research, implications for the American Red Cross and other volunteer disaster relief organizations, and positive social change.

Chapter 5: Discussion

Introduction

The purpose of this quantitative, cross-sectional study was to examine whether the independent variables of positive emotions, resiliency, coping, and post-traumatic growth were predictive of the dependent variable of the retention of American Red Cross disaster and emergency services volunteers. The selection of American Red Cross disaster and emergency services volunteers for this current study was driven by empirical findings on post-traumatic growth by Linley and Joseph (2004) and recommendations for further research on the debriefing process (Johnson-Jimenez, 2004). The variables used for this study drew from research by Fredrickson (1998, 2001), who proposed the concept that resilient people utilize positive emotions to cope (Bonanno, 2004, 2005) under stressful situations. Further investigation into research for this study's variables revealed Tedeschi and Calhoun (2004), who identified benefits from traumatic events, and Joseph and Linley (2005), who expanded the identification of these benefits into actual growth through adversity.

Further investigation into research that combined all four of this study's independent variables revealed Vazquez et al. (2005), who reviewed research that combined positive emotions, resiliency, coping, and post-traumatic growth as they pertain to terror attacks and the unanticipated positive ramifications, for both the individual and the community. Steerman and Cole (2009), who examined the motivations to become and remain an American Red Cross disaster and emergency services volunteer, conducted another study, which influenced this study.

Interpretation of Findings

Based on the results of the first and second hypotheses testing, none of the quality of life measures (positive emotions, resiliency coping, post-traumatic growth) were correlated or predictive of retention. However, the third and fourth hypotheses were supported. The most salient results originated from the independent *t*-tests.

The results of the third hypothesis testing were consistent with previous research, as women had significantly higher mean retention scores on the Changes in Outlook Questionnaire-S-Positive (Joseph et al., 2006) which measures both positive and negative post-traumatic changes. In previous research, women scored higher than men on measures of post-traumatic growth and demonstrated the ability to perceive spiritual and relationship changes, using the coping strategies connected to these parts of life to produce a greater effect (Tedeschi & Calhoun, 1996).

The results of the fourth hypothesis testing revealed only the American Red Cross 'debriefing at the disaster location' showed significant mean differences. As was presented in Chapter 4, Table 5, the RISCI (Fava et al., 1998) used in this current study revealed significant mean differences when examining retention. The American Red Cross defines debriefing as a "formal, structured discussion to bring closure to the disaster experience or to one or more stressful experiences on the job" (American National Red Cross, 2012).

In the American Red Cross organization, the precedence is for mental health services to American Red Cross volunteers in addition to other disaster and emergency responders. The idea behind debriefing is that unless responders perform well, the relief

operation may be jeopardized (Marcus, 1999). Results of this study highly suggest that the appropriate disaster mental health services personnel should implement the American Red Cross debriefing protocol at every disaster location.

The independent *t*-tests revealed more significant results as there were statistically significant mean differences (Creswell, 2002) between genders on one of the five scales. The results of this current study revealed that women had significantly higher mean retention scores on the CiOQ-S-Positive (Joseph et al., 2006) which measures positive post-traumatic growth. This current study finding is consistent with previous research conducted by Tedeschi & Calhoun (1996), Calhoun & Tedeschi (2001), Linley & Joseph (2004), and Joseph et al. (2005). Previous research by Tedeschi and Calhoun (1996) revealed that women scored higher than men on measures of post-traumatic growth and demonstrated the skill to recognize spiritual and relationship changes, using the coping strategies connected to these parts to life to produce a greater effect (Tedeschi & Calhoun, 1996).

Theoretical Support

The two theories that created the framework for this current study were the broaden-and-build theory of positive emotions (Fredrickson, 1998, 2001) and the organismic valuing theory of growth through adversity (Joseph and Linley, 2005). The major premise of the broaden-and-build theory of positive emotions is that resilient people have the ability to cultivate positive emotions in themselves to cope in stressful situations (Tugade, Fredrickson, & Barrett 2004). The results of this study partially supported the findings of Fredrickson (1998, 2001) on positive emotions and resiliency.

The DES-IV-A-PE (measuring positive emotions) had a statistically significant correlation with the ERS (measuring resiliency) for overall, $r = .39$, $p < .01$, and for men, $r = .51$, $p < .01$. There was not a statistically significant correlation for women, $r = .10$, $p < .01$.

Results partially supported the findings of Fredrickson (1998) on positive emotions and coping. Results also partially supported the findings of Sturgeon & Zautra (2013) and Nicholls, Polman, & Levy (2012). The DES-IV-A-PE (measuring positive emotions) had a statistically significant correlation with the RISCI-Coping (measuring coping) for overall, $r = .26$, $p < .01$, and for men, $r = .44$, $p < .01$. There was not a statistically significant correlation for women, $r = -.08$, $p < .05$.

The underpinning of the organismic valuing theory of growth is that people are motivated to move in a growthful route (Joseph & Linley, 2005; Joseph, 2009). The results of this research study partially supported the findings of Fredrickson (1998, 2001) on positive emotions and resiliency. The DES-IV-A-PE (measuring positive emotions) had a statistically significant correlation with the ERS (measuring resiliency) for overall, $r = .39$, $p < .01$, and for men, $r = .51$, $p < .01$. There was not a statistically significant correlation for women, $r = .10$, $p < .01$. The results of this current study partially supported the findings of Joseph and Linley (2005) on post-traumatic growth. The PTGI (measuring post-traumatic growth) had a statistically significant correlation with the CiOQ-S-Positive (Joseph et al., 2006) for overall $r = .53$, $p < .01$, and for men $r = .47$, $p < .01$. There was not a statistically significant correlation for women, $r = .23$, $p < .05$. The theoretical synthesis of the broaden-and-build theory combined with the organismic

valuing theory of growth through adversity supported this study, even though not all of the hypotheses were supported.

Limitations

Results of this study could significantly help to bring more awareness regarding the factors involved in the retention of American Red Cross disaster and emergency services volunteers that would be beneficial to the American Red Cross organization, as well as other disaster relief organizations. However, as in most quantitative survey research, limitations do exist, such as self-report response bias, critical event response bias, social desirability, and method bias.

Self-Report Bias

The research measurement inaccuracy that begins with the respondent (Dodd-McCue & Tartaglia, 2010; Mason, 2011) is termed self-report response bias. The research study questions are based on the topic of study and the study participants provide their perceptions about the topic. In spite of the collection method (i.e., survey, interview, observational narratives, case studies), the belief is that the data symbolizes an accurate, unbiased indication of what is being measured (Ngyuen, 2012; Dodd-McCue & Tartaglia, 2010).

Examples of self-report response bias (Donaldson, & Grant-Vallone, 2002) are recent timing of event response bias and critical event response bias, which are equally associated to the respondents' recall. Recent timing response bias occurs when the respondent grants events or information occurring in recent times greater weight than events or information happening in the more remote past (Dodd-McCue & Tartaglia,

2010; Tourangeau & Bradburn, 2010). Critical event response bias occurs when a dramatic event educes a greater influence in the evaluation than regularly transpiring events (Krosnick, 1999; Lub, Bal, Blomme, & Schalk, 2014). In this current study, self-report response bias may have occurred due to the reoccurring deployment of disaster and emergency services volunteers.

Social Desirability

Social desirability is the tendency for people to portray themselves (or their attitudes) approvingly according to the cultural norms. Thus, individuals' responses are persuaded by their opinion of situational norms and expectations (Mick, 1996; Holtgraves, 2004). Social desirability is the most examined pattern of response bias in social science research (Fisher & Katz, 2000). Social desirability bias has been found to affect the respondents attitudes (Fisher, 1993), self-reported behaviors (Mensch & Kandel, 1988), and measurement of personality variables (Mick, 1996). In this current study, social desirability may have occurred due to altruism of volunteering and the desire of the respondent to answer the questions according to their understanding of American Red Cross standards.

Method Bias

Method bias occurs when the same method is used to measure different constructs. The bias can occur because of the way the questions are constructed and asked, as well as the audience to which the questions are asked. Researchers suggested that when self-reports are used to measure both the predictor and the criterion variable, magnifications in correlation could occur from common method variance (Morgeson et

al., 2007; Podsakoff, MacKenzie, & Podsakoff, 2003). Bodner (2006) reviewed literature in six categories of psychology and ascertained that most studies (76%) involved the use of a single measurement method, and of those studies that used human subjects, 33% used a self-report questionnaire as the single measurement method (Bodner, 2006; Podsakoff et al., 2003). Research revealed (Podsakoff et al., 2003) that method biases can greatly influence item validities and reliabilities and additionally, the covariation between latent constructs. This suggests that researchers must be knowledgeable about the ways to control method biases that might be present in their studies (Podsakoff et al., 2003). In this current study, method bias may have occurred since the only instrument used was a self-report survey.

Recommendations

Penner (2002) defines volunteerism "as a long-term, planned pro-social behavior that benefits strangers and occurs within an organizational setting" (p. 448). Volunteerism is a type of social participation that encourages a sense of community and citizenship and as a type of social deed to serve the universal good (Omoto & Malsch, 2005; Snyder & Omoto, 2008). I recommend continued research to determine if a sense of social participation and community involvement of the American Red Cross disaster and emergency services volunteer, aids in volunteer retention (Penner, 2002).

Our goal in social science research is to have a sample large enough to represent the entire population were are examining. In this study, a sample size of $N = 120$ was used to represent the population of the Metro New York North Chapter and the Connecticut and Rhode Island region disaster and emergency services volunteers. I

recommend further research utilizing the entire National American Red Cross disaster and emergency services database of volunteers.

In this study, retention was measured by the disaster and emergency services volunteer's length of service. However, after thoroughly examining the data results, length of service is not an appropriate measure of retention. Even though length of service does not appear to measure retention, there is new and solid evidence that retention does relate to the volunteer's experience (Omoto, 2005). In this study, a debriefing at the disaster location revealed significant mean differences when examining retention. I recommend further examination of the American Red Cross debriefing protocol to help increase and ensure volunteer retention.

As with most disaster relief organizations, the American Red Cross has very structured disaster mental health services guidelines. Disaster volunteers on deployment often "experience the sights, smells and sounds of the disaster and feel the impact in the same way as the people in the community" (American National Red Cross, 2012, p. 53). As a result, it is normal for volunteers to have responses, even strong responses, to the disaster (American National Red Cross, 2012).

Post-deployment support is provided by the American Red Cross Disaster Mental Health individual or team at the disaster relief location and at the local chapter. According to the American Red Cross disaster mental health handbook, "Participation in post-deployment support should always be voluntary" (American National Red Cross, 2012, p. 53). As the results of this study reveal, a debriefing at the disaster location showed statistically significant mean differences in the retention of volunteers. I highly

recommend the American Red Cross make mandatory, the participation of disaster and emergency services volunteers in post-deployment support, especially at the disaster location. My final recommendation is for future researchers to expand upon this study's results and determine if a 'debriefing at the disaster location' is statistically significant for retention, with other major disaster relief organizations.

Social Change Implications

Disaster relief organizations such as the American Red Cross rely heavily upon their volunteers and are constantly challenged to ensure their volunteers remain active in their service (Steerman & Cole, 2009). This study perpetuated the knowledge base on the subject of positive emotions, resiliency and coping initiated by Fredrickson (1998, 2001) and extended by Tugade, Fredrickson, & Barrett (2004) and Bonanno (2008), by revealing that positive emotions, resiliency, or coping, do not predict retention. This study also propagated the knowledge base of post-traumatic growth initiated by Tedeschi & Calhoun (1996) and extended by Joseph & Linley (2005) and Vasquez et al. (2005) by revealing that post-traumatic growth does not predict retention. In spite of the results of this study, scientific and academic research should continue to examine the possibilities in which positive emotions, resiliency, coping, and post-traumatic growth, may enhance volunteer retention.

The most important result I found was that a debriefing at the disaster location showed statistically significant mean differences in the retention of the volunteers. In practical application terms, the debriefing process can be further researched to determine if the results of this study are reproducible across the entire National American Red Cross

organization. By analyzing the debriefing at the disaster location more intently, the opportunity exists to help advance, and bring better comprehension to how a disaster location debriefing influences volunteers to continue their volunteer service (Steerman & Cole, 2009).

The debriefing at the disaster location and retention results, will benefit not only the American Red Cross, but also all disaster relief organizations, by adding to their current knowledge base of how to retain their disaster and emergency services volunteers. Accurate, science-based volunteer assessments of retention will improve recruitment and retention practices by the American Red Cross and other various disaster relief organizations (Linley & Joseph, 2006).

To promote a positive social-impact and change perspective for American Red Cross disaster and emergency services volunteers, I would like to present my findings to the Metro New York North Chapter and the Connecticut and Rhode Island Region, as they generously supplied my volunteer participants. By analyzing the factor of a 'debriefing at the disaster location' more intently, the opportunity exists to help advance, and bring better comprehension to how a disaster location debriefing influences volunteers to continue their volunteer service. I believe that my findings will greatly assist the American Red Cross and other disaster relief organizations, by adding to their current knowledge base of how to retain their disaster and emergency services volunteers.

Conclusion

The American National Red Cross (2016) and other disaster relief organizations rely on their volunteer base to execute the day-to-day hands-on disaster relief work. At

any given moment, the American Red Cross and other disaster relief organizations maintain a volunteer workforce trained and available to respond to a disaster (Steerman & Cole, 2009). According to the U.S. Bureau of Labor Statistics (2015), volunteering in 2014 declined .10 percent from 2013, which equates to a loss of approximately 142,000 volunteers. Considering that the fact that volunteers are a fundamental part of the multitudes of non-profit organizations such as the American Red Cross, research into volunteer retention needs to continue.

My research question for this current study was, "What is the predictive strength of positive emotions, resiliency, coping, and post-traumatic growth, for the retention of disaster and emergency services volunteers?" This study expanded the current theoretical and empirical understanding of positive emotions, resiliency, coping, post-traumatic growth, and the retention of American Red Cross disaster and emergency services volunteers. The data collected for this study were used to investigate the predictive relationship between positive emotions, resiliency, coping, post-traumatic growth and the retention of American Red Cross disaster and emergency services volunteers. This study helped reduce the scarcity of research conducted on American Red Cross disaster and emergency services volunteers, explicitly in regards to positive emotions, resiliency, coping, and post-traumatic growth and their predictive effects on the retention of said disaster and emergency services volunteers.

The results of this study indicated participating in a debriefing at the disaster location was statistically significant when examining retention of disaster and emergency services volunteers. Results draw attention to the need for further research into the

American Red Cross debriefing process. Continued research into the retention of American Red Cross disaster and emergency services volunteers will help provide many benefits for positive social change, while helping the American Red Cross and other disaster relief organizations focus on how to increase their retention rates. American Red Cross volunteers selflessly give of their time and energy to aid those in distress, and in doing so, help to improve the lives of their fellow man. As researchers, we owe it to the American Red Cross and all disaster relief organizations, to keep searching for answers which will help these organization retain of the backbone of their organizations; their volunteers.

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Appendix A: Demographic Survey Questions

Note: These questions are for data analysis purposes only. All personal information is held in strict confidence by the researcher.

1. What is your Age?

Your Age in years:

2. What is your Gender?

Male

Female

3. What is your Race?

African American

Asian

Caucasian

Hispanic

Native American

Other (Please specify below)

4. What is your Marital Status?

Single - Never married

Married

Divorced

Widow/Widower

Cohabitating

Other (please specify below)

5. Which best describes your Education level?

Some High School

High School Diploma or Equivalent

Some College

Associate Degree (2 Years)

Bachelor Degree (4 Years)

Graduate Degree

6. Please list any Professional Licenses you hold (i.e., LCSW, LPN, LPC, LMFT, EMT, etc.)

License:

7. What is your current Employment status?

Full-time

Part-time

Retired

Unemployed

Other (please specify below)

8. What is your TOTAL length of service with the American Red Cross, as a Disaster and Emergency Services volunteer? (Only count your Disaster and Emergency Services work, and the TOTAL can be from more than one American Red Cross chapter) (i.e., "X" hours, "X" days, "X" months, or "X" years).

Length of Service:

9. As a Disaster and Emergency Services worker, have you ever been deployed to a local (including floods, fires, accidents, etc.), national, or international disaster? IF "NO", please check "NO" and Hit "Enter" in order to skip to Question #21 and continue.

Yes

No

10. What is the Date (Month/Date/Year) of your most recent deployment: (Note: If you have been deployed to consecutive disasters, please choose the most recent deployment)

Date (Month/Date/Year):

11. What was the Length of time of your most recent deployment? (i.e., "X" hours, "X" days, or "X" months)

Length of Deployment:

12. Prior to your most recent deployment, how many times have you been deployed as an American Red Cross Disaster and Emergency Services worker?

Prior # of Deployments:

13. During your most recent deployment, how many American Red Cross Disaster and Emergency Services locations did you work?

Number of Locations:

14. On your most recent deployment, did you have Direct Contact with disaster victims?

Yes

No

15. During your most recent American Red Cross Disaster and Emergency Services deployment, did you have to take time off from work or school?

Yes

No

16. During your most recent American Red Cross Disaster and Emergency Services deployment, did you have to leave behind immediate family (i.e., parents, husband, wife, and/or children)?

Yes

No

17. During your last American Red Cross Disaster and Emergency Services deployment, were American Red Cross Disaster Mental Health Services available at your disaster location? IF "NO" please check "NO" and then Hit "Enter" in order to skip to Question # 21 and continue.

Yes

No

18. During your most recent American Red Cross Disaster and Emergency Services deployment, did you utilize the American Red Cross Disaster Mental Health Services available to you?

Yes

No

19. During your most recent American Red Cross Disaster and Emergency Services deployment, did you receive a 'formal' debriefing at your disaster location. ('Formal' defined as meeting with an American Red Cross Disaster Mental Health worker)

Yes

No

20. Upon completion of your last American Red Cross Disaster and Emergency Services deployment, did you receive a 'formal' debriefing at your local American Red Cross chapter? ('Formal' defined as meeting with an American Red Cross Disaster Mental Health worker)

Yes

No

Appendix B: Permission for Instruments (E-mail correspondence)

RE: Requesting permission for use of Changes in Outlook Questionnaire (CiOQ)

Dr. [redacted]

2/03/15

To: Suzy Moravick, Dr. [redacted]

Dear Suzy,

Yes you are welcome to use the CiOQ.

All best,

[redacted]

Professor [redacted]

School of Education

[redacted]

University of Nottingham,

[redacted]

[redacted]

RE: Requesting permission to use The Rhode Island Stress and Coping Inventory (RISCI)

[redacted] (RISCI)

2/02/15

To: 'Suzy Moravick'

Hi Suzy,

Yes, you still have my permission. Do you need any sort of formal letter or is this email permission suitable?

Say hello to [redacted] for me, and Good Luck with your dissertation!

Best,

[redacted]

Re: Ego Resiliency Scale Permission

[redacted]

2/03/15

To: [redacted]

If Jack gave you permission, then I extend it to you too. But could you let me know what you intend to use the ER scale for?

Thanks,

[redacted]

RE: Requesting permission for the use of the Post-Traumatic Growth Inventory

Dr. [redacted]

2/03/15

To: Suzy Moravick

Dear Ms. Moravick--

You have my permission to use the PTGI in your dissertation study.

[redacted]

RE: Requesting Permission for use of the Differential Emotions Scale (DES)

[redacted]

2/18/15

To: Suzy Moravick

[redacted]

Hello,

Dr. Izard has retired and is no longer answering e-mails. He has indicated to me you have his permission to use the DES and wishes you all the best.

Regards, [redacted]

[redacted]

Coordinator – C-TECC and PSTC

Department of Psychological and Brain Sciences

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Appendix C: Letter of Cooperation (1)

American Red Cross Metro New York North Chapter

[redacted]- Manager Volunteer Resources

[redacted]

[redacted]

[redacted]

August 10, 2015

Dear Miss Suzanne Moravick,

Based on my review of your research proposal, I give permission for you to conduct the study entitled "Factors Involved in the Retention of American Red Cross Disaster and emergency services volunteers" within the American Red Cross Metro New York North Chapter.

As part of this study, I authorize you to:

1) To utilize the SurveyMonkey software program to collect all data necessary to complete this current research study.

2) To share this research study's results in order to educate the American Red Cross Metro New York North Chapter about the retention of disaster and emergency services volunteers.

Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibility is, to email an introductory statement and survey link, to all active American Red Cross Metro New York North Chapter disaster and emergency services volunteers. This process will protect the identity of the participants, allowing for confidentiality and anonymity.

We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

Authorization Official

[redacted]

Walden University policy on electronic signatures: An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically. Electronic signatures are regulated by the Uniform Electronic Transactions Act. Electronic signatures are only valid when the signer is either (a) the sender of the

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

Appendix D: Letter of Cooperation (2)

American Red Cross Connecticut and Rhode Island Region

[redacted] – Director, Volunteer and Youth Engagement

[redacted]

[redacted]

[redacted]

August 11, 2015

Dear Miss Suzanne Moravick,

Based on my review of your research proposal, I give permission for you to conduct the study entitled "Factors Involved in the Retention of American Red Cross disaster and emergency services volunteers" within the American Red Cross Connecticut and Rhode Island Region.

As part of this study, I authorize you to:

1) To utilize the SurveyMonkey software program to collect all data necessary to complete this current research study.

2) To share this research study's results in order to educate the American Red Cross Connecticut and Rhode Island Region about the retention of disaster and emergency services volunteers.

Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibility is, to email an introductory statement and survey link, to all active American Red Cross Connecticut and Rhode Island Region disaster and emergency services volunteers. This process will protect the identity of the participants, allowing for confidentiality and anonymity.

We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting and that this plan complies with the organization's policies.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the student's supervising faculty/staff without permission from the Walden University IRB.

Sincerely,

Authorization Official

[redacted]

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

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