

2021

Relationships Between Demographics, Adverse Childhood Experiences, and Compassion Fatigue in Volunteers

Sreela R. Stovall
Walden University

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>



Part of the [Social Work Commons](#)

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact ScholarWorks@waldenu.edu.

Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Sreela Roy Stovall

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

Review Committee

Dr. Shari Jorissen, Committee Chairperson, Human Services Faculty
Dr. Deborah Whitley, Committee Member, Human Services Faculty
Dr. Garth Den Heyer, University Reviewer, Human Services Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2021

Abstract

Relationships Between Demographics, Adverse Childhood Experiences, and Compassion

Fatigue in Volunteers

by

Sreela Roy Stovall

MPhil, Walden University, 2019

MS, University at Albany, 2005

BS, University at Albany, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Human Services and Social Welfare

Walden University

October 2021

Abstract

Volunteers are vital to the operation of human service organizations, but nonprofit organizations remain at risk of turnover and disruption of services due to compassion fatigue of volunteers. Researchers have gained insight with respect to adverse childhood experiences being related to compassion fatigue. The purpose of this quantitative, correlational study was to explore the relationship between volunteer demographics, adverse childhood trauma (ACEs survey), and compassion fatigue (Professional Quality of Life Compassion Fatigue subscale). Compassion fatigue resilience theory was the theoretical framework used for this study. Three research questions were used for the study, with data collection completed online via survey. Results were varied for the research questions. Multiple linear regression revealed that ethnicity ($p=0.013$) was related to compassion fatigue at a statistically significant level but gender, age, volunteer time, and education were not. Simple linear regression showed that ACE-SF score was related to ProQOL-5 CFS score at a statistically significant level ($p = 0.003$). ANCOVA results indicated no statistically significant differences in compassion fatigue by gender, ethnicity, or education level. Differences in compassion fatigue were found for some volunteer time groups, but these were not consistent. These findings fill a gap in the research on volunteerism as well as how personal factors are related to compassion fatigue. The results of this study may be used to improve organizational environments for volunteers serving in nonprofit organizations.

Relationships Between Demographics, Adverse Childhood Experiences, and Compassion

Fatigue in Volunteers

by

Sreela Roy Stovall

MPhil, Walden University, 2019

MS, University at Albany, 2005

BS, University at Albany, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Human Services and Social Welfare

Walden University

October 2021

Dedication

I would like to dedicate this to my wonderful family. Especially my daughters, Sabrina and Skylar, for always inspiring me to be the best mother and person I could be. If it hadn't been for them, I wouldn't be where I am today. For my mother, Mimi, who never doubted my abilities to achieve anything. For my father, Dr. Roy, so that I can be "just like him" as I told him when I was three years old. For my brother, Puku, who inspired me to be the person I am today in the helping profession. And for my supportive and wonderful husband, Chris, who has never given up on me and this dream, who helped steer the way for me on many occasions when I was close to giving up. And for my work family, who I cannot even begin to name. If it hadn't been for their support during the most difficult times in my life, I would never have gotten this far. I love you all—more than you'll ever know.

Acknowledgments

I would like to acknowledge my committee members, Dr. Jorissen and Dr. Whitley. Thank you for your support and feedback throughout this process. You have both helped me to get to this point in time and have helped me to fulfill the dreams of my family as well as my own. Thank you for believing in me.

Table of Contents

List of Tables	iv
List of Figures.....	v
Chapter 1: Introduction to the Study	1
Background.....	3
Problem Statement.....	4
Purpose of the Study.....	6
Research Question and Hypotheses.....	6
Theoretical Framework for the Study.....	8
Nature of the Study.....	9
Definitions	9
Assumptions	11
Limitations.....	12
Scope and Delimitations.....	13
Significance	14
Summary.....	15
Chapter 2: Literature Review	17
Literature Search Strategy	18
Theoretical Foundation.....	19
CF	20
Causal Model.....	25
Literature Review Related to Key Variables and/or Concepts.....	30

ACEs.....	31
Social Impact of ACES.....	36
CF	37
Volunteerism	39
Summary and Conclusions	44
Chapter 3: Research Method	46
Research Design and Rationale	46
Methodology.....	48
Population.....	48
Sampling and Sampling Procedures.....	49
Procedures for Recruitment, Participation, and Data Collection.....	51
Instrumentation and Operationalization of Constructs.....	54
Data Analysis Plan.....	61
Threats to Validity	64
Internal Threats to Validity.....	64
External Threats to Validity	66
Ethical Procedures	66
Summary.....	68
Chapter 4: Results.....	70
Data Collection.....	70
Results	72
Descriptive Statistics	72

Assumption Testing.....	81
Research Question 1 Results	91
Research Question 2 Results	92
Research Question 3 Results	93
Summary.....	94
Chapter 5: Discussion, Recommendations and Conclusions.....	96
Interpretation of the Findings	97
Interpretation of Findings Related to Theoretical Framework	97
Interpretation of Findings Related to the Literature	98
Limitations of the Study	102
Recommendations	107
Implications	108
Conclusion	109
References	112
Appendix A: Demographic Form.....	123
Appendix B: Professional Quality of Life Compassion Fatigue Subscale.....	124
Appendix C: Adverse Childhood Experiences Survey Short Form	125
Appendix D: Electronic Version of Survey.....	127
Appendix E: Mental Health Crisis Lines / Suicide Hotlines	133

List of Tables

Table 1. Variables and Coding	60
Table 2. Frequency of Sample Demographics (N = 86).....	74
Table 3. Comparison of Study Sample to Bureau of Labor Statistics Sample.....	75
Table 4. Frequency of Responses for ACE-SF (N = 85).....	76
Table 5. Frequency of ACE-SF Total Score (N = 85).....	77
Table 6. Frequency of Responses on Professional Quality of Life-5 Compassion Fatigue Subscale	79
Table 7. Correlation Table for Multicollinearity	84
Table 8. Pearson Correlation Between Professional Quality of Life-5 and Compassion Fatigue Total Score, Adverse Childhood Experience Total Score, and Demographics	84
Table 9. Multiple Linear Regression Results for Research Question 1.....	92
Table 10. Difference in Compassion Fatigue by Volunteer Time in Months	94

List of Figures

Figure 1. Compassion Fatigue Resilience Model.....	26
Figure 2. Linear Relationship of Research Question 1 Variables	82
Figure 3. Multivariate Normality.....	83
Figure 4. Normal Distribution Between Independent Variables and Dependent Variable	85
Figure 5. Interaction Between Adverse Childhood Experience and Compassion Fatigue	86
Figure 6. Distribution of Independent Variables and Dependent Variable	87
Figure 7. Demographics Interaction with Covariate for Homogeneity of Regression Slopes.....	89
Figure 8. Independent Variables with Covariate for Heteroscedasticity	90

Chapter 1: Introduction to the Study

Across the United States, nonprofit organizations play an integral role in addressing the needs of communities, ranging from addressing homelessness to assisting with donated goods for those in need (Ciucescu, 2009). As nonprofit organizations focus on providing services for marginalized and disadvantaged populations, they rely on volunteers for primary tasks to support their functionality (Garner & Garner, 2011). With the ongoing needs and demands associated with nonprofit organizations, volunteerism has been the backbone of most nonprofit human service agencies across the United States (Allen & Mueller, 2013; Chen & Yu, 2012; Garner & Garner, 2011; Scherer et al., 2016). In the most recent findings by the U.S. Bureau of Labor Statistics (2016), it is estimated that there are approximately 251,325 individuals who volunteer for organizations across the United States.

Despite the significant role of volunteers, they face volunteer fatigue, burnout, and turnover (Allen & Mueller, 2013; Chen & Yu, 2012; Garner & Garner, 2011; Scherer et al., 2016). Researchers have found a relationship between volunteerism, the demands of the position, and what is known as compassion fatigue (CF) as having high impact on individuals and thus organizations (Allen & Mueller, 2013; Chen & Yu, 2012; Garner & Garner, 2011; Scherer et al., 2016). Further, over the past two decades, there has been an increasing body of literature showing the long-term effects of adverse childhood experiences (ACEs) on physical health, behavioral health, addiction, employment, and lifestyle choices (Anda, Fleisher, et al., 2004; Anda, et al., 2010; Felitti et al., 1998; Howard et al., 2015; Keesler, 2018; Merrick et al., 2018; Putnam & Putnam, 2013).

ACEs are defined as negative experiences that individuals experience between the ages of 0–18 and encompass abuse, neglect, and exposure to traumatic environmental factors. Research has shown how ACEs play a role in how providers respond to CF (Butler et al., 2018; Garner & Garner, 2011; Howard et al., 2015; Keesler, 2018; Scherer et al., 2016). Additional research has been conducted with volunteers who had been exposed to trauma, and volunteers in such settings have been shown to be prone to developing CF (Pardess et al., 2013; Zeidner et al., 2013). But there have been few researchers who have addressed nonprofit organization volunteers' experiences of CF and how ACEs play a role in how volunteers' respond to CF (Butler et al., 2018; Garner & Garner, 2011; Howard et al., 2015; Keesler, 2018; Scherer et al., 2016). Though there is ample research regarding volunteers experiencing CF (Allen & Mueller, 2013; Chen & Yu, 2012; Garner & Garner, 2011; Scherer et al., 2016), the relationship between volunteer demographics, ACEs, and CF has yet to be addressed.

This chapter briefly describes the background of this study and previous research to substantiate the needs for and potential impact of this study. The implications of the study include bolstering findings associated with volunteerism and CF as well as expanding on the topic by providing insight around potential pre-existing trauma as it impacts volunteerism across demographics. Additionally, this study provides support for additional studies around nonprofit organizational dynamics so that these matters can be better addressed on an organizational level. Lastly, both the research question and theoretical framework will be explained, as well as the methodology, assumptions, and limitations.

Background

Numerous studies have been conducted to understand CF, with an emphasis on professionals and their experiences (Butler et al., 2018; Cohen & Collins, 2013; Diaconescu, 2015; Cohen & Collins, 2013; Harr, 2013; Ludick & Figley, 2017). Previous researchers have indicated that those working in highly traumatic situations who have had exposure to previous trauma in their own lives have a higher vulnerability to developing CF (Cohen & Collens, 2013; Kessler, 2018; Putnam et al., 2013; Quevillon et al., 2015). Professionals, such as social workers, exposed to the trauma of others experience STS as a function of directly and indirectly providing services. The combined exposure to trauma and lack of intervention in managing secondary trauma impacts rates of CF (Butler et al., 2018; Diaconescu, 2015; Cohen & Collins, 2013; Harr, 2013; Ludick & Figley, 2017). CF is related to morale and has the potential to impact retention/turnover (Allen & Muller, 2013; Scherer et al., 2016). Research has also been consistent and conclusive regarding the burnout that volunteers experience in working with the populations they serve can impact turnover (Allen & Mueller, 2013; Chen & Yu, 2012; Garner & Garner, 2011; Scherer et al., 2016). Burnout was found to be related to organizational and job-related stress enhancing likelihood of CF and decreased compassion for the client (Allen & Mueller, 2013; Cohen & Collens, 2013; Diaconescu, 2015; Garner & Garner, 2011; Harr, 2013).

Further, ACEs have been studied over the course of the past two decades in several contexts, particularly with respect to exploring the long-term effects of adverse early life experiences on health and behaviors in adulthood (Anda, Fleisher, et al., 2004;

Butler et al., 2018; Felitti et al., 1998; Howard et al., 2015; Keesler, 2018; Murphy et al., 2014; Strait & Bolman, 2015). Researchers have also focused on ACEs regarding students and professionals in human services (Butler et al., 2018; Howard et al., 2015; Murphy et al., 2014). Researchers have discussed how awareness of ACEs has potential to impact work functionality, including for volunteers working with vulnerable populations (Anda, Fleisher, et al., 2004; Howard et al., 2015; Murphy et al., 2014; Keesler, 2018). For example, Howard et al. (2015) suggested compassion satisfaction was lower in those with higher ACEs scores, which was one of the greatest predictors for turnover. Other researchers have explored the direct relationship between direct support professionals, practitioners in training, ACEs (Strait & Bolman, 2017), and retention (Keesler, 2018). It has been found that there is a relationship between ACEs and turnover (Keesler, 2018; Strait & Bolman, 2017). But there is a gap in research around correlative factors, such as ACEs, in volunteers. This speaks to the need for expanding on this research.

Problem Statement

Volunteers in human service agencies play an integral role in providing services to individuals and communities in need (Chen & Yu, 2012; Garner & Garner, 2011; Scherer et al., 2016). But one of the most challenging issues in volunteer organizations has been turnover of volunteers, which can disrupt services to those who need it the most (Allen & Mueller, 2013). A loss of volunteers can also lower motivation in volunteers who continue with the organization, which can then negatively impact those being served (Anda, Fleisher, et al., 2004; Allen & Mueller, 2013; Chen & Yu, 2012; Cohen &

Collens, 2013; Scherer et al., 2016). Researchers have indicated poor organizational fit (Scherer et al., 2016), poor volunteer management (Chen & Yu, 2012; Scherer et al., 2016), and role confusion (Garner & Garner, 2011) play roles in volunteer turnover.

Another reason that volunteers can be demotivated and potentially leave the organization include CF and burnout, which may be exacerbated by stressors from other traumatic experiences in their lives (Allen & Mueller, 2013; Butler et al, 2018; Cohen & Collens, 2013; Harr, 2013; Howard et al., 2015; Scherer et al., 2016; Strait & Bolman, 2018).

Although the research regarding CF (Adams et al., 2008; Cohen & Collens, 2013; Harr, 2013; Diaconescu, 2015) and burnout (Allen & Mueller, 2013; Chen & Yu, 2012; Garner & Garner, 2011; Scherer et al., 2016) in volunteers illuminates important findings, I found no researchers who have specifically examined the relationship between volunteer demographics, history of ACEs, and CF in volunteers working in human service nonprofits. Therefore, the problems that were addressed through this study were the negative results of CF and to volunteers as well as the volunteer organization and those they serve including work performance/satisfaction, retention, turnover, and disruption/decline of services available (Butler et al., 2018; Howard et al., 2015; Navalta et al., 2018; Scherer et al., 2016; Strait & Bolman, 2017). This was studied to address the documented difficulties nonprofit agencies may experience due to staff turnover (Allen & Mueller, 2013; Chen & Yu, 2012; Scherer et al., 2016) and difficulties meeting the needs of those who receive services due to this staff turnover (Allen & Mueller, 2013; Garner & Garner, 2011). The findings may provide information that different organizations could

use to mitigate the negative impact to the volunteers themselves (Chen & Yu, 2012; Quevillon et al., 2016; Scherer et al., 2016).

Purpose of the Study

The purpose of this quantitative, correlational study was to investigate the relationships between demographic factors (gender, age, ethnicity, years volunteering, education level), ACEs, and CF in volunteers. Previous researchers have examined volunteer burnout in the context of organizational management (Allen & Mueller, 2013; Chen & Yu, 2012; Scherer et al., 2016), but they have not examined other potential factors that may be related to volunteer CF in the context of previous trauma histories and demographics. This study addressed this gap by attempting to understand if there is a correlation between demographic factors, ACEs, and CF in the hopes that it can shed light on the relationship between demographic factors, ACEs, and CF in volunteers.

Research Question and Hypotheses

Research Question 1: What is the relationship between demographic factors (age, gender, ethnicity, years volunteering, education level) and CF as measured by the Professional Quality of Life (ProQOL-5) CFS in those who volunteer?

H_0 1: There is no statistically significant relationship between demographic factors (age, gender, ethnicity, years volunteering, education level,) and CF as measured by the ProQOL-5 CFS in those who volunteer.

H_a 1: There is a statistically significant relationship between demographic factors (gender, age, ethnicity, years volunteering, education level) and CF as measured by the ProQOL-5 CFS in those who volunteer.

Research Question 2: What is the relationship between ACE as measured by the ACE-Short Form (SF) survey and CF as measured by ProQOL-5 CFS in those who volunteer?

H₀2: There is no statistically significant relationship between adverse childhood trauma experience as measured by the ACE-SF survey and CF as measured by ProQOL-5 CFS in those who volunteer

H_a2: There is a statistically significant relationship between ACE as measured by the ACE-SF survey and CF as measured by ProQOL-5 CFS in those who volunteer.

Research Question 3: What are the differences between demographic factor groups (age, gender, ethnicity, years volunteering, education level) in CF as measured by the ProQOL-5 CFS in those who volunteer when controlling for adverse childhood trauma as measured by the ACE-SF survey?

H₀3: There are no statistically significant differences between demographic factor groups (age, gender, ethnicity, years volunteering, education level) in CF as measured by the ProQOL-5 CFS in those who volunteer when controlling for adverse childhood trauma as measured by the ACE-SF survey.

H_a3: There are statistically significant differences between demographic factor groups (gender, age, ethnicity, years volunteering, education level) in CF as measured by the ProQOL-5 CFS in those who volunteer when controlling for adverse childhood trauma as measured by the ACE-SF survey.

Theoretical Framework for the Study

The theoretical framework that was used for this study is CF resilience theory. CF resilience theory incorporates the concept that environment, co-existing factors/traumas, and present exposure to trauma have a bearing on the predisposition to mental health difficulties (Keesler, 2018; Ludick & Figley, 2017). These difficulties can impact the individual resilience factors (Ludick & Figley, 2017), and the impact of present-day exposure to trauma further continues to traumatize individuals (Butler et al., 2018) and increase the potential for CF (Ludick & Figley, 2017). CF has been found to have a negative relationship to job satisfaction (Anda, Fleisher, et al., 2004; Garner & Garner, 2011; Howard et al., 2015), and it creates the potential for staff turnover (Keesler, 2018; Scherer et al., 2016).

The CF resilience theory is based on the CF model (Ludick & Figley, 2017), which has evolved from a limited perspective on CF to incorporating and broaden the concept of CF to discern STS, empathy, and resilience. The theory stipulates that exposure to suffering and the ability to experience and express empathy play a role in efficacy. Exposure to the trauma of constituents can also either directly or indirectly influence on how someone who works with them is impacted, even if the trauma is not directly happening to that worker. Greater empathy results in higher vulnerability to STS (Ludick & Figley, 2017). The longer and more serious the exposure to the trauma of constituents, coupled with external/extraneous stressors, the less resilient the worker becomes and thus the greater the CF level that can result (Ludick & Figley, 2017). As

resilience increases through trauma-informed care practices, the greater the resiliency and decreased CF (Ludick & Figley, 2017).

Nature of the Study

This was a quantitative, correlational study of a cross-sectional nature (Campbell & Stanley, 1963). I sought participant volunteers through the Walden Participant Pool as well as social media resources (Facebook, online/electronic bulletin boards, and human service listservs) and by posting flyers on public bulletin boards in my area (libraries, grocery stores, coffee shops, etc.). These flyers invited potential participants to complete an online survey including a demographic form, ACEs survey, and ProQOL-5 survey (Keesler, 2018).

Definitions

Adverse childhood experiences (ACEs): ACEs are traumatic experiences that occur between the ages of 0–18. This includes physical abuse/neglect, emotional abuse/neglect, family/environmental stressors/exposure, and sexual abuse (Felitti et al., 1998). These traumatic experiences have been found to be related to health and mental health issues in adulthood (Felitti et al., 1998).

Burnout: Burnout is a term used to define behaviors and attitudes that occur as a cumulative function of experiencing decreased satisfaction in the workplace, increased experiences of CF, decreased resilience to work stressors, and high exposure to traumatic or high stress experiences (Figley, 1995; Ludick & Figley, 2017). The symptoms of burnout include “a state of physical, emotional, and mental exhaustion” (Ludick & Figley, 2017, p. 579), leading to chronic difficulties with mood management, health,

exhaustion, intrusive thoughts of what the individual has been exposed to, inconsistent work performance, and difficulties in home life (Anda, Fleisher, et al., 2004; Ludick & Figley, 2017; Killian, 2008).

Compassion fatigue (CF): CF can be defined as symptoms of exhaustion coupled with decreased efficacy in their job role while further experiencing STS in which the individual is traumatized and experiences symptoms (Figley, 1995; Ludick & Figley, 2017). These symptoms may include avoidance of triggering stimuli that reminds them of the trauma they have heard of and/or feelings of physiological arousal secondary to learning of trauma (Figley, 1995, 2002; Ludick & Figley, 2017; Killian, 2008).

Compassion satisfaction: This term can be defined as an individual deriving personal satisfaction from helping others (Figley, 1995; Ludick & Figley, 2017). Compassion satisfaction is an important aspect of being effective in the helping field and is specific to the helping individual feeling as though their investment in helping others is rewarded (Diaconescu, 2015).

Secondary traumatic stress (STS): STS is the term that is more commonly known as vicarious trauma or CF (Ludick & Figley, 2017). STS occurs in service providers and includes symptoms consistent with post-traumatic stress disorder (PTSD), such as avoidance of triggering stimuli that reminds them of the trauma they have heard of and/or feelings of physiological arousal secondary to learning of trauma (Figley, 1995, 2002; Ludick & Figley, 2017).

Volunteers: This term refers to individuals who chose to utilize their personal time, without financial compensation, to “deliver services or perform tasks” (Allen & Mueller, 2013, p. 139) for an organization.

Assumptions

There were several key assumptions for this study. The primary assumption of this study was that the factors being studied are objective and singular; therefore, researcher bias was limited (Frankfort-Nachmias et al., 2015; Simon, 2011). Though I used an electronic survey to collect data anonymously (no names or other information that would identify the participant were collected), there was bias with respect to the topic due to my human service experiences and exposure to working in human services with others. I have been in the field of human services as front-line staff as both a provider and volunteer for over 15 years, and this research topic was of interest as a function of experience.

It was also assumed that the study could be replicated by others and the results generalizable to an extent (Creswell, 2009; Frankfort-Nachmias, et al., 2015; Simon, 2011). Every effort was made to ensure that the study can be duplicated, though generalizability may be limited. It was further assumed that the methodology utilized for this study was appropriate in relation to the purpose of the study (Simon, 2011). Other methods were explored, such as a mixed method study. However, because there is a lack of initial research on the topic of CF, ACEs, and demographics, it was more appropriate to gain initial data to then explore options for later research to expand on the topic.

An additional assumption was that there may have been a relationship between demographics, ACEs, and CF in volunteers. I assumed based on the previous literature that there was a potential relationship between variables. However, though previous researchers have indicated a strong relationship between being in a helping profession, ACEs, and CF (Butler et al., 2017; Diaconescu, 2015; Felitti et al., 1998; Harr, 2013; Howard et al., 2015; Murphy et al., 2014), I explored the relationship between these factors with the assumption that there was any relationship. Another assumption of this study was that volunteers in human services have a history of ACEs that is influencing CF or that these volunteers are already experiencing CF, which may be exacerbated by ACEs (Pardess et al., 2013; Zeidner et al., 2013). Lastly, it was assumed that those participating in this study would be honest in their self-report (Simon, 2011). All efforts to ensure that respondent anonymity and confidentiality occurred as no identifying information (name, phone number, address, etc.) was collected, and the data collection was done electronically via the internet, so no face-to-face contact occurred (Frankfort-Nachmias et al., 2015).

Limitations

There were a number of limitations to this study with respect to methodology. One of the primary limitations to this study was that it was a cross-sectional quantitative study with convenience sampling. This study was not longitudinal; therefore, the results are not specific to the individuals who responded during a period of time (Frankfort-Nachmias, et al., 2015; Simon, 2011). There was further limitation to the study with respect to the respondents. As this was a convenience sampling study, specifically of

volunteers in the United States, and not random, the generalizability of the study was limited (Simon, 2011).

There were also limitations with respect to threats to validity, including internal threats (history, statistical regression, instrumentation inconsistencies, selection, testing, evaluation apprehension and hypothesis guessing). External threats include limitations to technology (inability to access the electronic survey) and selection bias (Frankfort-Nachmias, et al., 2015; Mertler, 2018; Shadish et al., 2002). Instrumentation was an additional limitation of this study. I used the ACE-SF (Felitti et al., 1998) and ProQOL-5 CFS (Stamm, 2010). Though both instruments are valid and reliable, the results of the study are only as conclusive as per the scoring of both instruments, which indicates the possibility of instrumentation inconsistencies and hypothesis guessing (Shadish et al., 2002; Simon, 2011). Human error is also a potential limitation to this study. Although I attempted to study the factors objectively, I am aware of the underlying assumption that there was any relationship at all. Furthermore, as a function of my profession in mental health treatment, there was some researcher bias with respect to ACEs and CF based on work experience. Thus, I chose a quantitative method to help mitigate bias.

Scope and Delimitations

The primary delimitation of this study was the specific topic and constructs being studied. I chose to study volunteerism and relationships between individuals volunteering, demographics, ACEs, and CF. Though there were several varying facets that could have been explored with respect to social change, nonprofits, and volunteerism, I chose to focus on a specific cohort (volunteers in nonprofits) and specific

factors that they have (demographics) or have/are experiencing (ACEs and CF). The scope of this study was limited to a volunteer demographic in the United States. This limited generalizability with regard to domestic and international volunteer demographic (Frankfort-Nachmias et al, 2015). Additionally, the study was further limited to individuals who are volunteers working in nonprofit organizations ages 18 and older. Therefore, the research cohort is specific and generalizability to volunteers or other populations are limited (Frankfort-Nachmias et al., 2015).

Significance

The implications for the results of this study include providing information that may be used to develop training and support for those who volunteer in organizations to lessen the potential for CF and burnout in this population. This includes the development of training and self-care programs to address ACEs and CF to reduce their potential issues for volunteers and the resulting larger negative impacts, such as psychiatric distress, burnout, and potential turnover rates within the organization (Adams et al., 2006; Allen & Mueller, 2013; Chen & Yu, 2012; Diaconescu, 2015; Harr, 2013; Harrison & Westwood, 2009; Scherer et al., 2016). This may positively impact the organization and those they serve by assisting volunteers in managing CF and continuing to volunteer. This has the potential of continuing the quality of services offered by the organization as well as the continuum of care (Allen & Mueller, 2013; Chen & Yu, 2012; Garner & Garner, 2011; Scherer et al., 2016). Since volunteers are the backbone of nonprofit organizations, they are an undercelebrated resource whose impact on social change is often overlooked. In examining how factors such as ACEs and CF may be impacting this

population, best practices can be developed to protect this resource that is one of the primary modalities of social change.

Summary

Volunteer turnover, CF and ACEs are dynamic systems that have been explored extensively and across disciplines (Adams et al., 2006; Anda, Fleisher, et al., 2004; Allen & Mueller, 2013; Chen & Yu, 2011; Baum et al., 2014; Cohen & Collens, 2013; Diaconescu, 2015; Felitti et al., 1998; Harr, 2013; Figley, 2002; Ludick & Figley, 2017; Merrick et al., 2018; Scherer et al., 2016; Turgoose et al., 2015). There is a relationship between pre-existing traumatic experiences, CF, and the potential development of burnout (Anda, Fleisher, et al., 2004; Baum et al., 2014; Cohen & Collens, 2013; Esaki & Larkin, 2013; Harr, 2013; Howard et al., 2015; Murphy et al., 2014), particularly when there are decreased resiliency factors as explored in CF resilience theory (Diaconescu, 2015; Figley, 2002; Ludick & Figley, 2017; Radey & Figley, 2007).

As nonprofit agencies continue to grow, there will be high demands required by agencies (Chen & Yu, 2011; Wells, 2018), organizational dysfunction (Allen & Mueller, 2013; Garner & Garner, 2011), and rates of turnover experienced by said agencies (Scherer et al., 2016; Wells, 2018). Researchers have indicated that professionals working in human service professions, such as counseling and social workers, have high rates of CF as well as ACEs (Murphy et al., 2015; Strait & Bolman, 2017; Topitzes et al., 2016). Though researchers have been able to establish a relationship between turnover and CF rates among volunteers (Allen & Mueller, 2013; Chen & Yu, 2011; Scherer et al., 2016), research in how volunteers may be impacted by ACEs was yet to be fully explored

(Howard et al., 2015). Chapter 2 will provide the literature review, and in Chapter 3 I will present the methodology on how these relationships were explored with respect to volunteer demographics, experiences of CF, and potential ACEs scores.

Chapter 2: Literature Review

Volunteers in human service agencies play an integral role in providing services to individuals and communities in need (Chen & Yu, 2012; Garner & Garner, 2011; Scherer et al., 2016). In 2010, volunteers contributed “\$173 billion and devoted 8.1 billion hours of service to communities around the United States” (Allen & Mueller, 2013, p. 139). But one of the most challenging issues in human service volunteer organizations has been turnover of volunteers, which can disrupt services to those who need it the most (Allen & Mueller, 2013). One-third of volunteers leave within a 1 year (Scherer et al., 2016). A loss of volunteers can result in lower motivation and poor performance by other volunteers who continue with the organization that can then negatively impact those being served (Anda, Fleisher, et al., 2004; Allen & Mueller, 2013; Chen & Yu, 2012; Cohen & Collens, 2013; Scherer et al., 2016).

Researchers have indicated some of the reasons that volunteers leave organizations include poor organizational fit (Scherer et al., 2016), poor volunteer management (Chen & Yu, 2012; Scherer et al., 2016), and role confusion (Garner & Garner, 2011). CF has also been identified as another reason that volunteers can be demotivated and leave the organization (Scherer et al., 2016). Some of the negative impacts of CF include high blood pressure, stress, cardiopulmonary disease, mental health issues, liver disease, and higher risk for suicide (Anda, Fleisher, et al., 2004; Butler et al., 2018; Felitti et al., 1998; Howard et al., 2015; Navalta et al., 2018; Strait & Bolman, 2017). Thus, these individuals may choose to stop volunteering, which impacts

organizational function and the services rendered (Butler et al., 2018; Howard et al., 2015; Navalta et al., 2018; Scherer et al., 2016; Strait & Bolman, 2017).

Professionals working in the field of trauma treatment and who have personal histories of trauma are more likely to experience CF (Baum et al., 2014). In the last 20 years, there has been more research on ACEs (Merrick et al., 2018), which can lead to behavioral/mental health issues (Anda, Fleisher, et al., 2004; Howard et al., 2015; Keesler, 2018; Merrick et al., 2018; Putnam & Putnam, 2013). But there have been few researchers who have addressed how ACEs play a role in how volunteers respond to CF (Butler et al., 2018; Garner & Garner, 2011; Howard et al., 2015; Keesler, 2018; Scherer et al., 2016). Substantial research has been conducted on the effects of STS and the impact of trauma histories on those working in the helping field, primarily licensed and professional workers (Baum et al., 2015; Diaconescu, 2015; Harr, 2013; Ludick & Figley, 2017; Mäkikangas & Kinnunen, 2016; Pardess et al., 2013; Radey & Figley, 2007; Scherer et al., 2016; Zeidner et al., 2013). However, the relationship between volunteer CF, ACEs, and demographics has yet to be addressed. Therefore, the purpose of this study was to address the effects of CF on volunteers, especially those with ACEs.

Literature Search Strategy

The literature search strategy used for this study was primarily through online databases such as Google Scholar and the Walden University Library databases, including Thoreau, ProQuest Central, PubMed, ResearchGate, PsycINFO, SOCINDEX with full text, ScienceDirect, Elsevier, JAMA, and Mendeley. The key words utilized for the searches included *adverse childhood experiences*, *ACES*, *diathesis-stress theory*,

compassion fatigue, burnout, trauma and volunteers, compassion fatigue theory, volunteers, volunteers and secondary traumatic stress, nonprofessional staff, ACES in volunteers, and volunteer turnover and nonprofit. Additional literature searches were conducted on CF theory with an emphasis on publications occurring within the past 10 years. Several earlier studies were cited as well to provide context to the more recent literature.

I also used Feedly, an RSS feed specific to human service and health care, with the keywords of *volunteer* and *nonprofit* to provide recent publications within volunteer agencies to assist with providing additional resources. Additional references were sought out with emphasis on ACEs in the past 10 years. Additionally, I performed citation chaining through more recent studies in Mendeley and Google Scholar to further explore the topic. Lastly, I used the ProQOL website to research the instrument used in the study. The years searched ranged from 1995 to the present and included search across disciplines.

Theoretical Foundation

CF resilience theory was the theoretical framework used for this study. The concept of CF has evolved primarily as a function of how it has been researched across several professions (Adams et al., 2006; Figley, 1995; Howard et al., 2015; Ludick & Figley, 2017; Mäkikangas & Kinnunen, 2016; Radey & Figley, 2007). CF resilience theory is complex and has physical, psychological, and social levels (Ludick & Figley, 2017). Figley (1995, 2002) initially explored secondary trauma from a systems

perspective in 1982, and he proposed CF theory in response to the addition of PTSD in the third edition of the *Diagnostic and Statistical Manual of Psychiatric Disorders*.

When diagnosticians reached the conclusion that severe psychological trauma can lead to the development of PTSD (Figley, 1995, 2002; Ludick & Figley, 2017), the diagnostic criteria were extended to be more inclusive of those working in the field of trauma, specifically mental health professionals (Adams et al., 2006; Figley, 2002; Ludick & Figley, 2017; Radey & Figley, 2007). Figley (1995) theorized that CF was a form of PTSD that was occurring because of working with individuals who have trauma, particularly when a highly empathic worker was exposed repeatedly to traumatized individuals (Adams et al., 2006; Figley, 1995, 2002; Ludick & Figley, 2017). Figley proposed that mental health professionals have a heightened level of empathy, or compassion, which is required to work with traumatized individuals. It is in their empathic responses that the professional experiences a form of vicarious trauma or STS (Adams et al., 2006; Boscarino et al., 2004; Figley, 1995, 2002). CF resilience theory is used to measure and examine how the variables of high empathic responses to trauma has the potential to cause secondary traumatic injury. In examining detachment, self-care, traumatic history, trauma exposure, and difficult life demands, the theory examines the whole of how present experiences, combined with past experiences and resilience, contribute to the development of CF (Ludick & Figley, 2017).

Compassion Fatigue

Defining compassion can be considered a high awareness of or knowing the suffering of others (Radey & Figley, 2007), and it is usually associated with concepts of

empathy, sympathy, and altruism (Radey & Figley, 2007). Figley (2002) stated that “the meaning of compassion is to bear suffering” (p. 1434). This speaks to the concepts of empathy, which is the ability to appreciate suffering in another; sympathy, which is the ability of an individual to share emotions with another; and altruism, which is selfless concern for others (Ludick & Figley, 2017; Radey & Figley, 2007). Engaging in altruistic behaviors while working with those who are traumatized often causes a decreased capacity of compassion and therefore gives rise to CF (Figley, 2002; Radey & Figley, 2007).

CF is the more “user-friendly” term to describe STS (Radey & Figley, 2007). STS is a form of PTSD in which individuals experience symptoms such as intrusive images and thoughts, avoidance of triggering stimuli (i.e., people, places, activities), dissociation, and difficulty with social/occupational functioning (Diaconescu, 2015; Figley, 1995). The term CF has been utilized in various ways including through describing the results of vicarious trauma and STS (Bride & Radey, 2007; Figley, 2002). CF similarly involves high levels of anxiety and preoccupation associated with the traumatized individual while further feeling avoidant and/or numb to triggers of their trauma (Figley, 2002). An individual who experiences CF, or STS, may experience changes to their cognitive processes and beliefs due to having been exposed to the trauma of others. These changes may be related to the individual experiencing disruptions on various levels including connection to others, self-identity, and self-awareness (Bride & Radey, 2007). It has been suggested that there is overlap between the concept of burnout and that CF is a separate phenomenon that has the capacity to impact the overall well-being of the individual

(Adams et al., 2006; Baird & Kracen, 2006; Boscarino et al., 2004; Figley, 1995; Ludick & Figley, 2017; Radey & Figley, 2007). CF may lead to an emotional and physical exhaustion, which could ultimately lead to a loss of empathy and compassion for those that they serve (Diaconescu, 2015).

CF is a term that has become synonymous with the helping field (Mäkikangas & Kinnunen, 2016). STS/CF occurs in service providers and includes symptoms consistent with PTSD, such as avoidance of triggering stimuli that reminds them of the trauma they have heard of and/or feelings of physiological arousal secondary to learning of trauma (Figley, 1995, 2002; Ludick & Figley, 2017). CF could be exacerbated by stressors from other traumatic experiences (Allen & Mueller, 2013; Butler et al, 2018; Cohen & Collens, 2013; Harr, 2013; Howard et al., 2015; Scherer et al., 2016; Strait & Bolman, 2018).

In defining CF, there are nine key stipulations to STS or CF that have been identified (Figley, 2002; Ludick & Figley, 2017; Radey & Figley, 2007). The first stipulation is that the experience of STS/CF is complex and frequently inevitable due to the nature of the helping field (Ludick & Figley, 2017; Radey & Figley, 2007). An individual exposed to the suffering of others may have a higher likelihood of experiencing STS/CF (Figley, 1995). The second is that it occurs primarily as a function of the level of experience/exposure to the trauma. The more the helping individual is exposed to traumatic information/experiences, the higher the impact with the STS/CF response may be (Ludick & Figley, 2017; Radey & Figley, 2007). The third is the empathic response level, which has a direct impact on STS/CF. In theory, the higher the

empathic response, or the more empathy the provider experiences toward the individual, the more pronounced the STS/CF has the potential to be (Figley, 2002).

The fourth stipulation is stress compartmentalization, which is specific to an individual's ability to separate stress from daily functioning (Ludick & Figley, 2017). The ability to compartmentalize can play a key role in the development of STS/CF (Ludick & Figley, 2017). As the individual struggles to compartmentalize, or separate work life from other life stressors, the higher the potential of STS/CF developing (Ludick & Figley, 2017; Radey & Figley, 2007). Difficulty managing workplace stressors is a simultaneously vague and universal experience/condition in human services (Radey & Figley, 2007). This factor is specific to compartmentalization (Ludick & Figley, 2017). One of the primary factors influencing workplace stressors has been found to be lack of resources within agencies. Providing both physical and emotional resources have a positive relationship with increased satisfaction while further decreasing the stress associated with feeling frustrated at the inability to provide the services necessary to those in need. Providing education and effective supervision and support are examples of such resources (Boscarino et al., 2004; Diaconescu, 2015; Radey & Figley, 2007).

The fifth stipulation relates to exposure. Based on the understanding that the individual is exposed to trauma, this stipulation is specific to the longitudinal effects of trauma exposure (Ludick & Figley, 2017; Radey & Figley, 2007). Prolonged exposure to the traumatizing information may result in STS/CF (Ludick & Figley, 2017; Radey & Figley, 2007). When previous trauma is recalled, STS/CF may be increased, which is the sixth stipulation. An individual with an existing trauma history or prolonged trauma

exposure has a higher likelihood and incidence of STS/CF (Ludick & Figley, 2017; Radey & Figley, 2007). Mental health professionals experiencing CF have a higher frequency of having experienced past trauma, and childhood trauma has been associated with higher rates of CF (Turgoose & Maddox, 2017).

The seventh stipulation is that increased satisfaction may increase sense of purpose and worth, thus decreasing STS/CF (Ludick & Figley, 2017; Radey & Figley, 2007). Compassion satisfaction is an important aspect of being effective in the helping field and is specific to the helping individual feeling as though their investment in helping others is rewarded (Diaconescu, 2015). As the individual experiences higher rates of compassion satisfaction, the STS/CF response may weaken (Diaconescu, 2015; Ludick & Figley, 2017).

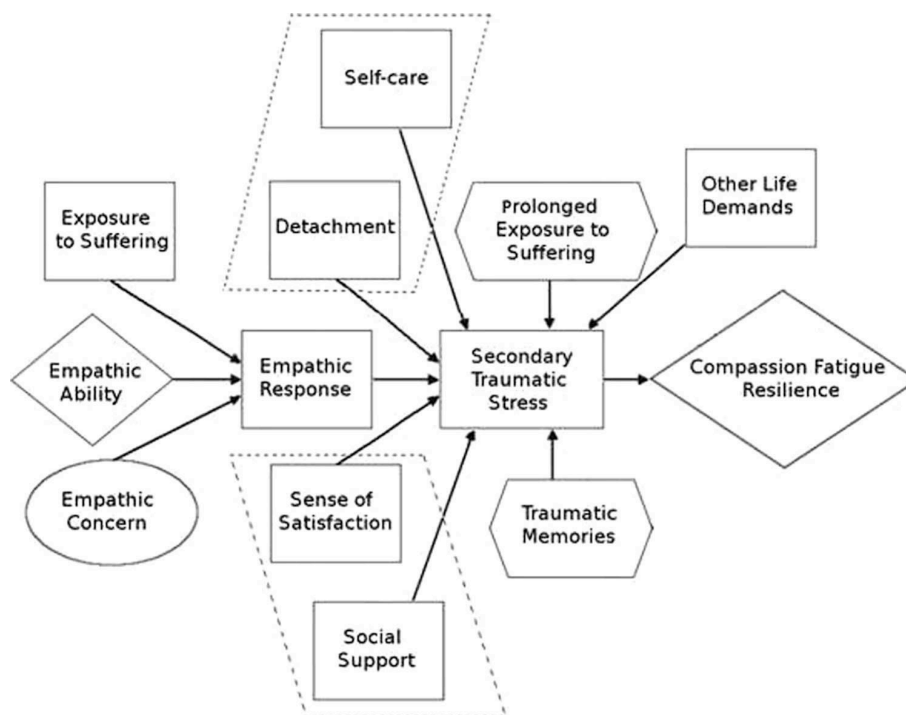
Social support is the eighth stipulation and is specific to supervisory, peer, and organizational support which mitigates STS (Diaconescu, 2015; Ludick & Figley, 2017; Radey & Figley, 2007). As the helping individual continues to receive support, the impact of STS/CF lessens to further assist the individual with managing STS and increasing compassion satisfaction (Diaconescu, 2015; Ludick & Figley, 2017; Radey & Figley, 2007). Self-care is a source of well-being, particularly for those in human services (Figley, 1995, 2002; Ludick & Figley 2017; Quevillion et al., 2017; Radey & Figley, 2007). Self-care, both individually and organizationally, assist in minimizing CF. But both lack of knowledge and insufficient practice of self-care behaviors are contributing factors in the development of CF (Diaconescu, 2015; Harr, 2013; Quevillion et al., 2017). However, maintaining positivity about work while effectively managing stress and

practicing self-care have a diminishing impact on the development of CF (Radey & Figley, 2007).

The final stipulation is that the higher the resilience and effective stress management, the greater the direct impact on STS/CF (Ludick & Figley, 2017; Radey & Figley, 2007). Resilience is another key factor in how an individual internalizes trauma and the implementation of effective coping strategies for stress management assist with STS/CF management (Diaconescu, 2015; Ludick & Figley, 2017; Radey & Figley, 2007). The combination of these factors leads to the experience of STS, which is the direct contributor to CF (Figley, 1995, 2002; Ludick & Figley, 2017; Radey & Figley, 2007). There are several factors that contribute to the lack of work satisfaction (Radey & Figley, 2007). Fostering a sense of mastery and accomplishment mitigates the lack of satisfaction that is often experienced while working in human services (Radey & Figley, 2007). Supervision and peer support are further factors in fostering work satisfaction (Diaconescu, 2015; Harr, 2013; Ludick & Figley, 2017; Radey & Figley, 2007).

Causal Model

At the core of CF resilience theory is the idea that empathic responses are the essence of helping others to effectively assists those in need (Figley, 2002; Ludick & Figley, 2017). This is the concept behind the causal model of CF resilience theory, and there are 1 variables that form this model (Figley, 2002; Ludick & Figley, 2017). Figure 1 is a representation of the elements of this model.

Figure 1*Compassion Fatigue Resilience Model*

Note. From “Toward a Mechanism for Secondary Trauma Induction and Reduction: Reimagining a Theory of Secondary Traumatic Stress,” by M. Ludick and C. R. Figley, 2017, *Traumatology*, 23(1), p. 114. (<https://doi.org/10.1037/trm0000096>)

Empathic Response

The first four variables of the causal model fall under the larger sector of *empathic response*, which is the primary contributor to STS (Ludick & Figley, 2017).

The first variable is empathic ability. This term refers to the aptitude, or ability, of the helper to perceive the pain of others. The ability to experience empathy for the individual is paradoxical in that it is necessary to help others while also being the primary cause of being vulnerable to CF (Figley, 2002; Ludick & Figley, 2017). There is an ability to understand another individual's pain and suffering which simultaneously may allow the victim to be helped while exposing the helper to STS (Ludick & Figley, 2017). The second variable is empathic concern which is specific to having the impetus to help those in need. Empathy, combined with concern, may lead to service delivery (Figley, 2002; Ludick & Figley, 2017). The higher the empathic concern, the higher the chance of STS (Ludick & Figley, 2017).

The third variable is prolonged exposure to the suffering. The direct exposure to the emotional suffering of the traumatized individual may begin to take a toll on the emotional health of the service provider (Figley, 2002; Ludick & Figley, 2017) and this can often result in role changes and/or turnover (Figley, 2002; Ludick & Figley, 2017). Ludick and Figley (2017) found that as helpers are more exposed to trauma, the higher the potential for symptoms of STS. The fourth variable is empathic response. Empathic response is specific to how considerably the helper attempts to reduce the traumatized individual's suffering (Figley, 2002; Ludick & Figley, 2017). Similar to empathic ability,

this is a paradoxical experience in that empathic exposure to suffering may contribute to the development CF. Additionally, it has been learned that lack of experience, training, and effective supervision and/or lack of support can contribute greatly to STS experienced (Ludick & Figley, 2017).

Actual Trauma Experiences

The second sector of STS encompasses the experience of actual trauma (Ludick & Figley, 2017). The ongoing culmination of exposure to trauma while further experiencing other life stressors that may lead to STS (Ludick & Figley, 2017; Radey & Figley, 2007; Turgoose & Maddox, 2017). When this occurs, the fifth variable of traumatic memories may appear. Traumatic memories may trigger symptoms of PTSD, as well as potential depression and anxiety experiences (Figley, 2002; Ludick & Figley, 2017). When the helper recalls the memories of the victim, they could induce a visceral response. Life disruption is the sixth variable in which the helper experiences unforeseen changes to their routines and life responsibilities. These disruptions are considerable to the helper in that they may result in feelings of distress on a personal level (Figley, 2002; Ludick & Figley, 2017). The seventh variable is prolonged exposure. In this variable, there is a perception of needing to maintain a level of responsibility to the victim over a period of time (Figley, 2002; Ludick & Figley, 2017).

CF Resilience

The third sector is CF resilience. Resilience has been termed as emotional hardiness and speaks to the ability to adapt and cope well as a means by which to develop resistance to trauma (Ludick & Figley, 2017). The primary factors of resilience

encompass detachment (unique work complexities), well-being/self-care, social support, and cultivation of resilience development (sense of satisfaction) (Ludick & Figley, 2017). Detachment is the individual's ability to disconnect from the suffering of others (Ludick & Figley, 2017), which includes the ability to compartmentalize and separate oneself from the work they are engaging in (Figley, 2002). Self-care/well-being is specific to the ability of the individual to engaging in practices/activities in which the individual maintains their health and life (Ludick & Figley, 2017). Social support allows the individual to buffer the traumatic experiences that they are exposed to, thus lessening the emotional experience of exposure to trauma (Ludick & Figley, 2017). Lastly, sense of satisfaction is specific to the individual garnering satisfaction from their work with others and feeling fulfilled through their work (Ludick & Figley, 2017). The variable of compassion stress is the eighth variable. This variable is directly related to the residual attempts of the empathic response and ongoing need to address the suffering of the victim (Figley, 2002; Ludick & Figley, 2017). High intensity impacts the immune system and overall quality of life, as observed by Figley (1995, 2002) and others (Adams et al., 2006; Boscarino et al., 2004; Ludick & Figley, 2017; Radey & Figley, 2007). The ninth variable is sense of achievement/satisfaction (Radey & Figley, 2007). This variable tends to be related to lower compassion stress and speaks to how notably the helper feels that they have helped those in need (Figley, 2002; Ludick & Figley, 2017). The tenth variable is disengagement. With disengagement, compassion stress decreases or is prevented if the helper can create boundaries/limits in their relationship to the victim (Figley, 2002; Ludick & Figley, 2017). Lastly is CF itself. CF occurs as a function of the combined

variables previously outlined and is further sustained as a function of a lack of support both professionally and personally (Ludick & Figley, 2017; Radey & Figley, 2007).

CF resilience theory is essential to exploring how CF and the factors that mitigate it (resilience) serve to impact individuals who service non-profits (Adams et al., 2008; Figley, 1995; Figley, 2002; Ludick & Figley, 2017; Radey & Figley, 2006). As it has been established that CF occurs in professions exposed to trauma, it can be further theorized that the impact to volunteers exposed to traumatized populations served by nonprofits have the potential to develop CF similar to their professional counterparts (Adams et al., 2008; Figley, 1995; Figley, 2002; Ludick & Figley, 2017; Radey & Figley, 2006). Researchers who have studied volunteer turnover have indicated CF as a factor impacting turnover and further speaks to the lack of countermeasures in place to mitigate the effects of CF (organizational support) (Chen & Yu, 2013; Garner & Garner, 2011), which are specific to the resilience factor of the CF resilience theory (Ludick & Figley, 2017). Therefore, utilizing this theory in the context of this study serves to substantiate how CF impacts volunteers.

Literature Review Related to Key Variables and/or Concepts

The literature of this study on ACEs, CF and volunteerism across human service agencies is varied but comprehensive, requiring a review of both theoretical and scholarly literature. The primary areas that were covered were: (a) research on ACEs, including the landmark study and most recent literature, which includes updated research on demographics; (b) CF research across professions and demographics; and (c) research related to understanding the relationship between volunteerism, CF and ACEs.

ACEs

ACEs are traumatic experiences that have been found to be related to health and mental health issues in adulthood (Felitti et al., 1998). It has been found that exposure to abuse and household dysfunction in formative years can have a negative impact on health and mental health in adulthood (Felitti et al., 1998). From a biological standpoint, these traumatic experiences have a dose dependent effect in that the higher and more the number of traumas an individual experience, the higher the probability that the individual will develop emotional effects later in life (Merrick et al., 2018; Murphy et al., 2014; Navalta et al., 2018; Teicher & Samson, 2016; Topitzes et al., 2016).

Diathesis-Stress and ACEs

The diathesis-stress model is at the crux of ACEs and is specific to the neurobiological and evolutionary framework that examines sensory and perceptual experiences as it impacts brain development (Keesler, 2018; Navalta et al., 2018). In order to effectively understand the impact of ACEs on adult health issues and behaviors, it is imperative to better understand the diathesis-stress model as it impacts neurological development and subsequent biology with respect to latter-life illnesses and predispositions (Navalta et al., 2018). The model emphasizes that individuals may or may not have a biological “vulnerability” which causes them to be more susceptible to being negatively impacted by environmental stressors (Belsky & Pluess, 2009). The diathesis-stress theory focuses on the bidirectional interactions between the individual and the environment (and individuals adapt as a function of necessity, thus developing self-regulatory behaviors (Benight, 2012).

The concept of ACEs is based on a dose-dependent relationship in that the higher the number of ACEs experienced the higher the probability of developing a variety of issues, including but not limited to medical and behavioral concerns (Navalta et al., 2018). This is related to understanding how environment can predict biopsychosocial outcomes as a function of stress/trauma (Benight, 2012). There is a high emphasis on the medical model in that there is focus on pre-existing risk factors and resilience factors related to exposure to stress/trauma (Benight, 2012). The evolution of medical, behavioral, and psychological issues is primarily as a function of how at-risk the individual has been while accounting for their exposure to trauma/stress (Benight, 2012).

At various times during brain development, stress hormones impact neurodevelopment (Belsky & Pluess, 2009; Navalta et al., 2018; Teicher & Samson, 2016). When an environmental stressor is introduced to the individual in childhood, a synergistic effect occurs in which the individual is then disproportionately more susceptible to developing other problems in development (Belsky & Pluess, 2009). Neurological development is adaptive and the continual exposure to stress hormones (corticosteroids) results in changes from normal brain development. Brain systems are individually influenced by the different ACEs so experiencing the same (or similar) ACE could result in very different adaptation and results (Navalta et al., 2018). There are structures of the brain that are specific to emotion regulation, impulsivity, and anxiety management (Navalta et al., 2018). The model has expanded further by incorporating an evolutionary framework to further extend on how early childhood trauma impacts anxiety

and mood later in life as it impacts interpersonal functioning, psychological well-being, and overall physical health (Belsky & Pluess, 2009; Navalta et al., 2018).

Postulates of Diathesis-Stress Model. There are four postulates of the diathesis-stress model. In the first, the brain of the individual experiences one or several periods post-birth trauma during which the individual is exposed to high levels of stress causing a shift in neurodevelopment (Navalta et al., 2018). Teicher and Samson (2016) learned that poor care/neglect/deprivation was related to the development of the amygdala, which is responsible for social and emotional processing in the brain. Maltreatment changes the morphology, or structural formation, of the brain in specific regions that are responsible for cognition, motor function, sensory function, and memory formation, including the prefrontal cortex, corpus callosum and hippocampus (Teicher & Samson, 2018). These changes appear to occur during time frames during neurodevelopment in children (Navalta et al., 2018; Teicher & Samson, 2016).

The second postulate is that the subsequent development of the brain is as a function of having to adapt to the environment (Navalta et al., 2018; Teicher & Samson, 2016). Both neglect/deprivation and abuse later in life during ages 0-18 has been shown to contribute to changes in the amygdala, which is responsible for social and emotional management (Navalta et al., 2018; Teicher & Samson, 2016). The third postulate is the exposure of stress hormones (corticosteroids) in the brain cause developmental changes to brain structure (Benight, 2012; Navalta et al., 2018). The specific genetic pathways are altered as a function of neglect, maltreatment, and abuse with respect to the hormones

responsible for mood regulation (i.e., serotonin, GABA, dopamine) (Benight, 2012; Navalta et al., 2018).

The fourth postulate is that the disparate brain systems are then impacted by the different ACEs the individual is exposed to, thus causing sensory disruption, including perceptual and memory issues (Navalta et al., 2018). These structural changes then lead to difficulty with social exchange, social learning (i.e., learning facial expressions, social reasoning), the ability to regulate emotions (i.e., anger management) and impulsivity (Navalta et al., 2018; Teicher & Samson, 2016). Additionally, there is evidence to suggest that these changes in the brain structure is indicated in predicting psychiatric illness (Teicher & Samson, 2016).

Susceptibility Factors and ACEs

There are three susceptibility factors, or moderators related to ACEs which are phenotypic, endophenotypic, and genetic (Belsky & Pluess, 2009; Putnam et al., 2013). Phenotypic susceptibility is specific to temperament and emotional characteristics of an individual (Belsky & Pluess, 2009). This factor has been difficult to substantiate in research as child rearing plays a differential role in childhood temperament. Nevertheless, infant and toddler emotionality and temperament appears to indicate certain susceptibilities to ACEs (Belsky & Pluess, 2009; Navalta et al., 2018; Putnam et al., 2013). For instance, children who struggle with being more anxious/fearful, angered, impulsive, or difficult have been found to have higher susceptibility to experiencing behavioral changes when having to adapt to higher stress environments in contrast with

children who have contrasting phenotypic qualities (Belsky & Pluess, 2009; Navalta et al., 2018; Putnam et al., 2013).

Endophenotypic susceptibility is specific to how physiologically reactive the brain is to environmental stressors (Belsky & Pluess, 2009; Putnam et al., 2013). There is a u-shaped relation between how nurtured a child is versus neglected/high stress in early childhood with respect to their environments (Belsky & Pluess, 2009). For instance, a child who has physical, behavioral, and psychological supports in place has a decreased endophenotypic susceptibility to developing ACEs as a result of not being as exposed to the stress that their counterparts may experience in high stress environments. The brain adapts to the stress of the environment as a means by which to survive the lack of supports and the presence of high stress (Belsky & Pluess, 2009; Navalta et al., 2018; Putnam et al., 2013; Teicher & Samson, 2016).

Genetic susceptibility is perhaps the most researched aspect of this theory (Belsky & Pluess, 2009; Benight, 2012; Navalta et al., 2018). Researchers who have studied genetics have found that there are genetic markers responsible for emotion regulation and behavioral function that are impacted more pointedly in those with genetic predispositions, such as serotonergic (serotonin), dopaminergic (dopamine), gamma-aminobutyric acid (GABA), and Apolipoprotein E systems (Benight, 2012). These specific genetic pathways are negatively impacted by trauma and can result in the individual having substantial difficulty coping with varying life functions, thus developing maladaptive behaviors (Benight, 2012; Putnam et al., 2013). This impacts how trauma is processed in the brain and through the stress response experienced in the human body,

thus contributing to the development of difficulties later in life (Benight, 2012; Navalta et al., 2018; Putnam et al., 2013). It is imperative to understand how early human experiences prior to the completion of neurobiological development can influence both physical health and adult behaviors prior to the age of 18 (Benight, 2012; Navalta et al., 2018; Putnam et al., 2013). As indicated by researchers in previous studies, there is a clear correlation between the intensity of ACEs and adult health problems and health behaviors as a function of how both brain structure and genetics are influenced (Benight, 2012; Navalta et al., 2018; Putnam et al., 2013). There is potential to better uncover how ACEs influence adult behaviors and the potential development of CF in those who are volunteering in human service agencies.

Social Impact of ACES

There has been an increased effort to explore the social impact of early childhood trauma (Hughes et al., 2017; Jones et al., 2018; Metzler et al., 2017; Nurius, Logan-Greene, & Green, 2012). Researchers who have studied adult mental health populations indicate that there is a cumulative impact of traumas between the ages of 0-18 with respect to mental health (Nurius et al., 2012). The exposure to early life trauma impacts not only neural development but also has the potential to have an impact on psychosocial development, which is specific though not limited to socioeconomic status, i.e., lower income, lower education, increased disability, decreased social/emotional support, and decreased access to resources (Nurius et al., 2012). ACEs have been found to be strongly associated with determinants of life opportunities (Metzler et al., 2017). These social disadvantages further have potential to impact overall functioning and health (mental and

physical) in adult populations (Nurius et al., 2012), including with respect to substance abuse, violence, sexual health, and physical activity levels/weight management (Hughes et al., 2017). This further extends to a positive statistical relationship between higher ACEs and lower education, employment, and income (Jones et al., 2018; Metzler et al., 2017). Higher ACEs scores are correlated with higher noncompletion of high school, poverty level housing, and unemployment (Metzler et al., 2017; Ye & Reyes-Salvail, 2014). Additionally, interpersonal relationships (the mechanism by which individuals develop relationships with social supports and relate to others) has been explored in the context of ACEs. Individuals across demographic variables who have higher cumulative ACEs scores have higher interpersonal difficulties which has further potential to be explored in the context of how these difficulties may lead to issues with employment and overall social functioning (Poole, Dobson & Pusch, 2018).

CF

CF in the helping professions has been studied extensively (Adams et al., 2006; Baum et al., 2014; Diaconescu, 2015; Harr, 2013; O'Brien & Haaga, 2015; Pardess et al., 2014). Boscarino, Figley, and Adams (2004) and Adams, Boscarino, and Figley (2006) explored rates of CF among first responders and learned that rates of CF are statistically substantial in these fields across ethnic and gender demographics. Adams et al. (2006) initiated the exploration of CF in other helping professionals, primarily social workers, nurses, doctors, and mental health professionals (Diaconescu, 2015; Harr, 2013; Mäkikangas & Kinnunen, 2016; O'Brien & Haaga, 2015; Quevillion et al., 2017). Harr (2013) and Diaconescu (2015) explored CF in the context of professionals in the helping

field while focusing on interventions. While their work was important in understanding CF for specific helping professionals, it is lacking with respect to how CF may be impacting others who are in the helping field, such as volunteers.

Harr (2013) addressed CF as it is occurring in social work settings. She explored how CF negatively impacts the overall health of those in the caretaking role (social workers), and specifically addresses the need for workplace health improvement to combat the long-term effects of CF with respect to providers' health as well as their constituents. Diaconescu (2015) studied how social workers experienced CF as a function of directly and indirectly providing services and found that the combined exposure to trauma and lack of intervention in managing secondary trauma impacted rates of CF. Both indicated a need for supervision/management in conjunction with behavioral measures (i.e., self-care) to lessen CF.

Relationships between individual demographics and CF have been explored by researchers (Adams et al., 2006; Boscarino et al., 2004; Baum et al., 2014; Ludick & Figley, 2017; O'Brien & Haaga, 2015). Baum et al. (2014) studied gender differences with relation to CF and found that females developed CF more than males. Women may require a higher level of support to decrease CF (Baum et al., 2014). Other researchers have indicated both gender and age are factors in the significance of CF rates (O'Brien and Haaga, 2015). In researching factors that influence CF rates, it has been learned that individuals who are older and male have lower CF rates, while those younger and female are prone to higher CF rates (O'Brien & Haaga, 2015).

CF Versus Burnout

CF refers to the internal experiences of the individual from a cognitive and emotional standpoint while burnout is more directly related to changes in behaviors (Bride & Radey, 2007; Figley, 1995; Allen & Mueller, 2013). Burnout refers to a level of emotional exhaustion following lengthy exposure to the stressors of the work the individual experiences (Ludick & Figley, 2017; O'Brien & Haaga, 2015). While like CF, burnout is as a function of exposure to stressful experiences over a period of time while CF has the potential to occur after only one traumatic interaction (O'Brien & Haaga, 2015). Symptomology of burnout includes boredom, cynicism, physical and emotional fatigue, diminished personal investment in activities, and possible depression symptoms (Allen & Mueller, 2013; Diaconescu, 2015). Allen and Mueller (2013) indicated that one of the primary factors that influences intention to quit among volunteers is experiencing burnout as a function of experiencing CF.

Volunteerism

According to Nesbit, Christensen, and Brudney (2018), volunteerism in nonprofit organizations is essential to organizational management, service delivery, and cost-efficiency. Volunteers provide essential functions and services to and through organizations (Allen & Mueller, 2013) Volunteerism is defined as individuals choosing to give their time and talents to provide services without financial compensation (Allen & Mueller, 2013). Services have been valued at almost \$173 million, with 8.1 billion hours across U.S. communities as of 2010 (Allen & Mueller, 2013). Nesbit et al. (2018) estimate that between one-fourth and one-third of local government agencies utilize

volunteers, while four-fifths (80%) of nonprofit/charities use volunteers. Between September 2011 and September 2012, approximately 26.5% of the U.S. population (64.5 million people) volunteered, with a median of 50 hours per week. In reviewing organizational impact of volunteerism, 84% of companies identify that volunteerism is a crucial aspect of nonprofit functionality (Scherer et al., 2016). Volunteer involvement in nonprofit organizations is critical as a function of the financial resources and need to deliver services to constituents, which further speaks to the high volume of volunteers in nonprofits (Nesbit et al., 2018)

Volunteer Turnover

The primary issue impacting nonprofit functioning is turnover, which is specifically when a volunteer exits the agency at any given time and a replacement is necessary (Allen & Mueller, 2013; Chen & Yu, 2012; Scherer et al., 2016). Turnover rates have been shown to be detrimental with respect to service quality (Allen & Mueller, 2013; Garner & Garner, 2011; Nesbit et al., 2018). Statistically, it has been learned that over one third of volunteers are not retained in the following year of volunteering (Scherer et al., 2016).

Volunteer turnover is important to non-profit organizations because much of the work that they do is possible because of volunteers (Allen & Mueller, 2013; Chen & Yu, 2012; Garner & Garner, 2011; Scherer et al., 2016). In examining the impact of volunteer turnover, Hausknecht, Trevor, and Howard (2009) learned that the consequences of turnover are far-reaching with regards to constituent outcomes and perception of the organization. They found a positive relationship between high turnover and negative

experiences and perceptions among constituents (Hausknecht et al., 2009). McCambridge (2017) indicated that turnover rates over the course of the past several years grew from 16% to 19% (between 2013 and 2015) with direct care volunteers as being the most difficult positions to maintain. In some nonprofit organizations, turnover is as high as 37%; with government-funded nonprofits as some of the most difficult to address due to the bureaucratic nature of recruitment and budgeting (McCambridge, 2017). In, the turnover rates have increased by 5% across the industry between 2008 and 2018 despite the growth rate of constituents. The cost of this is multidimensional and includes issues related to staffing and training costs; continuity of care; staff workload distribution; absenteeism; staff dissatisfaction; and higher workloads (Wells, 2018).

Turnover is largely a function of role confusion/conflict and lack of support, in which the individual experiences strife with respect to understanding their job roles and having that role remain consistent while lacking the organizational support/structure and direction required of functional volunteering (Allen & Mueller, 2013; Chen & Yu, 2012; Garner & Garner, 2011; Setti et al., 2018). A large portion of literature on volunteer turnover focuses on the concept of burnout (Allen & Mueller, 2013; Scherer et al., 2016; Setti et al., 2018), noting that CF is a secondary, though contributing factor (Scherer et al., 2016). Researchers who completed early studies about volunteer turnover in nonprofit agencies focused on burnout as the primary cause of turnover but neglected to examine the impact of CF as a contributing factor in the development of burnout (Scherer et al., 2016). Chen and Yu (2012) as well as Allen and Mueller (2013) substantiated that volunteer burnout has a statistically positive relationship with turnover rates. The findings

were specific to organizational issues, particularly with respect to volunteers feeling unheard/unrecognized and volunteers experiencing role ambiguity with regards to their job expectations in comparison to the tasks they were completing and feeling overworked. High work demands, coupled with lack of resources, had a statistically significant relationship to burnout rates and organizational commitment of participants (Chen & Yu, 2012). The authors did not examine preexisting factors regarding volunteer ACE histories and whether this plays a role in the work experiences of volunteers and their turnover rates, stemming from burnout, nor did they explore the context in which burnout is occurring for volunteers with regards to experiencing CF (Allen & Mueller, 2013; Chen & Yu, 2012).

One of the most comprehensive and broad studies on volunteerism, organizational function and turnover was by Scherer and colleagues (2016). While they found organizational issues and poor volunteer fit/congruency as contributing factors in turnover within agencies, they also examined burnout rates as influenced by CF and across demographics. The authors did not fully examine any preexisting factors that were related to burnout rates, such as ACEs in volunteers but note the poor organizational/volunteer fit, coupled with high rates of CF, contribute to turnover. (Scherer et al., 2016).

Garner and Garner (2011) noted in their study that organizational mismanagement, coupled with role confusion around volunteer responsibilities played a crucial role in turnover, which has been further corroborated by Howard et al. (2015). The findings in the Howard et al. (2015) research indicate that there is significant

potential to expand on how volunteers may be theoretically impacted by ACEs and subsequent CF though this remains to be explored. While compassion satisfaction and CF are not the same thing, Howard et al. (2015) highlighted that there were existing gaps in the literature with respect to how the two influence each other, as further suggested by Ludick and Figley (2017) around CF resilience theory.

Researchers who have studied healthcare and social service workers have learned that high rates of CF are substantial and are a health and safety concern for those employed in the field (Quevillon, Gray, Erickson, Gonzalez, & Jacobs, 2016; Sinclair et al., 2017). Many researchers focused on CF in the context of working professionals and as a predictor for burnout (Adams et al., 2006; Baum et al., 2014; Boscarino et al., 2004; Diaconescu, 2015; Harr, 2013; O'Brien & Haaga, 2015; Scherer et al., 2016; Sinclair et al., 2017; Turgoose et al., 2017). This resonates with volunteers as well. In various studies over the course of the past several years, volunteer turnover has been the emphasis, particularly as a function of attempting to better understand why turnover is occurring and how to mitigate it (Allen & Mueller, 2013; Chen & Yu, 2012; Garner & Garner, 2011; Scherer et al., 2016). In gaining a better understanding of turnover, it has been learned that burnout has a relationship with turnover or intention to quit (Allen & Mueller, 2013; Chen & Yu, 2012; Scherer et al., 2016). However, the primary factor influencing burnout is CF and has not been significantly explored in this context for volunteers in general, or volunteers with ACEs.

Summary and Conclusions

In summary, volunteer turnover, CF and ACEs are dynamic systems that have been explored extensively and across disciplines (Adams et al., 2006; Anda et al., 2004; Allen & Mueller, 2013; Chen & Yu, 2011; Baum et al., 2014; Cohen & Collens, 2013; Diaconescu, 2015; Felitti et al., 1998; Harr, 2013; Figley, 2002; Ludick & Figley, 2017; Merrick et al., 2018; Scherer et al., 2016; Turgoose et al., 2015). In reviewing the literature, it was apparent that there is a relationship between pre-existing traumatic experiences, the development of CF and the potential development of burnout, which is the subsequent result of experiencing the aforementioned (Anda et al., 2004; Anda et al., 2010; Baum et al., 2014; Cohen & Collens, 2013; Esaki & Larkin, 2013; Harr, 2013; Howard et al., 2015; Murphy et al., 2014), particularly when there are decreased resiliency factors as explored in CF resilience theory (Diaconescu, 2015; Figley, 2002; Ludick & Figley, 2017; Radey & Figley, 2007).

As non-profit agencies continue to grow with respect to addressing the needs of constituents, the demand for volunteers remains high though difficult to address due to the high demands/needs required by agencies (Chen & Yu, 2011; Wells, 2018), organizational dysfunction (Allen & Mueller, 2013; Garner & Garner, 2011) and rates of turnover experienced by said agencies (Scherer et al., 2016; Setti et al., 2018; Wells, 2018). Researchers have explored and qualified that professionals working in human service professions, such as counseling and social workers, have high rates of CF as well as ACEs (Murphy et al., 2015; Strait & Bolman, 2017; Topitzes et al., 2016), further bolstering CF resilience theory with respect to understanding how pre-existing trauma

can potentially influence the development of CF in those working in the field (Figley, 2002; Harr, 2013; Ludick & Figley, 2017; Murphy et al., 2015). While researchers have been able to establish a relationship between turnover and CF rates among volunteers (Allen & Mueller, 2013; Chen & Yu, 2011; Scherer et al., 2016), research in how volunteers may be impacted by ACEs had yet to be fully explored (Howard et al., 2015), particularly as there have been preliminary findings indicating the impact ACEs has on employment and socioeconomic issues in later adulthood (Anda et al., 2004; Hausknecht et al., 2008) The relationship between volunteerism, CF and ACEs had yet to be fully explored. In chapter three, I will present the methodology on how these relationships will be explored with respect to volunteer experiences of CF and potential ACEs scores.

Chapter 3: Research Method

The purpose of this study was to investigate the relationships between the independent variables of demographic factors (gender, ethnicity, years volunteering, education level, and type of volunteer organization) and ACEs and the dependent variable of CF in volunteers. Previous researchers have examined volunteer CF in the context of organizational management (Allen & Mueller, 2013; Chen & Yu, 2012; Scherer et al., 2016) but have not examined other potential factors that may be related to volunteer CF in the context of previous trauma histories and demographics. This study may fill this research gap. In this chapter I address the research methodology including research design and rationale; methodology related to the population, sampling and sampling procedures, and data collection; and threats to validity and ethical concerns.

Research Design and Rationale

This was a quantitative, correlational, cross-sectional study. A quantitative design allows researchers to develop other models for further evaluation and research. In quantitative research, the researcher attempts to explain the effects between variables in a numerical or statistical manner (measurable; Campbell & Stanley, 1963; Frankfort-Nachmias et al., 2015). There are dependent variables, which are the variables the researcher is attempting to understand, and the independent variables, which are the variables that are potentially related to the dependent variables. Quantitative designs allow hypotheses to be tested (Campbell & Stanley, 1963; Frankfort-Nachmias, et al., 2015).

A correlational design is used when wanting to determine whether there are relationships between variables (Campbell & Stanley, 1963; Frankfort-Nachmias, et al., 2015). One of the primary purposes in using such a design is to determine both the direction and strength of any relationship between the independent and dependent variables without establishing causation (Campbell & Stanley, 1963; Frankfort-Nachmias et al., 2015). This type of design was appropriate for my study because I did not intend to establish causation but rather strength of relationship, though one potential drawback to this method is ascertaining whether an unknown variable affected the direction and strength of relationship between variables (Frankfort-Nachmias et al., 2015). Another potential design considered was pre-test/post-test, which involves no control group, and the surveys can be given before and after the introduction of an independent variable or intervention (Campbell & Stanley, 1963; Frankfort-Nachmias, et al., 2015). However, as I was not providing an intervention or attempting to evaluate the introduction of a variable, a pre-test/post-test design was not appropriate.

A cross-sectional design is used when data are collected at only one point in time and examined across variables (Frankfort-Nachmias et al., 2015). The current study entailed collecting data at one point in time via a survey in Survey Monkey (Campbell & Stanley, 1963; Field, 2013; Frankfort-Nachmias et al., 2015; Killian, 2018). The design further allowed data to be collected at a faster rate with a sufficient sample size while being cost-effective (Field, 2013; Frankfort-Nachmias, et al., 2015).

Though I considered a qualitative design for this study, there is emphasis in qualitative research to observe, document, and interpret the experiences of individuals

and groups (Frankfort-Nachmias et al., 2015), which was not the purpose of this study. This would have allowed me to measure CF or ACEs and analyze the relationship between demographics and these variables in an alternative manner, particularly with respect to providing context of phenomenon, but quantitative measures provided a numerical and statistical way to measure the variables and analyze the relationship between them (Frankfort-Nachmias et al., 2015). Additionally, CF and ACEs are measured by the use of quantitative measures and standards as per the ProQoL-5 and ACEs-SF, respectively (Adams et al., 2006; Anda, Fleisher, et al., 2004; Bride et al., 2007; Butler et al., 2018; Cohen & Collens, 2013; de Figueiredo, et al., 2014; Felitti et al., 1998; Frankfort-Nachmias et al., 2015; Harrison & Westwood, 2009; Hegney et al., 2014; Quevillon et al., 2016; Scherer et al., 2016; Sinclair et al., 2017; Stamm, 2010). A mixed method design in the future would allow both the quantitative and qualitative content to expand on quantitative data while providing qualitative context (Frankfort-Nachmias et al., 2015).

Methodology

Population

The target population that the sample for this study was drawn from was adult volunteers (ages 18 and up) working in nonprofit organizations, which provide services to marginalized populations. According to the most recent Bureau of Labor Statistics (2016) report, there are approximately 251,325 individuals who volunteer for organizations in the United States. Between 2010–2011, it is estimated that those who volunteered for nonprofit agencies supplied approximately 50 median hours annually

(Scherer et al., 2016). Financially, volunteer hours of service can be equated to approximately \$173 billion in the United States alone in 2010 (Allen & Mueller, 2013).

Sampling and Sampling Procedures

Sampling Method

I used purposeful convenience sampling as well as snowball sampling. Purposeful sampling is used when seeking participants who have the knowledge or have experience necessary to participate in the study. For this study, I sought data from a specific population due to the common characteristic that they share as volunteers (Frankfort-Nachmias, et al., 2015). One downfall of this form of sampling is lack of randomization and thus decreased generalizability. But probability sampling would have been too high in cost, both financially and with respect to time, and would have been difficult to do with regard to contacting all volunteers nationally. In contrast, convenience sampling involves identifying and selecting those participants who are most convenient or accessible to the study. For this study, the Walden Participant Pool, Facebook volunteer pages, volunteer listservs, and local community bulletin boards were used for ease of access, cost, and higher probability of gathering the sample size necessary for the study.

Further, snowball sampling is when individuals who see the recruitment materials for the study and/or have participated in the study are allowed to tell others about the study (Frankfort-Nachmias et al., 2015). This allows for smaller and narrow populations, further adding to the potential to bolster participants and provide higher effect. Data collection becomes more feasible, decreases costs, and does not threaten the validity of the study.

Inclusion and Exclusion Criteria

The inclusive criteria for participants were individuals who have volunteered or are currently volunteers at nonprofit agencies who are 18 and above, volunteered in the United States, and who read English. Individuals under 18 are minors and were not allowed to participate due to inability to provide informed consent without their parents/guardians also having to go through the informed consent process as well (Frankfort-Nachmias et al., 2015). Those over the age of 65 were able to participate in this study despite initial concerns related to capacity and competency that impacts ability to provide informed consent (Creswell, 2009; Frankfort-Nachmias, et al., 2015).

Sample Size

Sample size was calculated including effect size, alpha, and power (Field, 2013; Jan & Smith, 2019). Sample size for this study was calculated for all three research questions to determine required sample size range. I used the largest calculated with the least probability of error with largest statistical effect to ensure that I have the appropriate sample size to ensure the alpha level, effect size, and power desired for this study (Field 2013; Keesler, 2018). An alpha level of .05 was used for stronger statistical effect (Field, 2013; see also Keesler, 2018). With the number of predictors for the study, a large effect size does not require a sample size much higher than 100; thus, I used an effect size of 0.15 for higher statistical effect (Field, 2013). The statistical power desired for this study is 0.95 and that is as a function of the number of predictors for this study, which is more than one (Field, 2013). Sample size was calculated utilizing G*Power software (Faul et al., 2009; Field, 2013; Jan & Shieh, 2019).

The final research question was calculated with a multiple linear regression (based on the test family of t for linear multiple regression with the fixed model, single regression coefficient R^2 , a priori alpha of .05, effect size f^2 of 0.15, alpha error probability of 0.05 and power of 0.95, 2 predictors) had a sample size of 89. For the analysis of covariance (ANCOVA) with an alpha = .05 and power = .80, and the comparison of one group with one dependent variable and two independent variables (covariate), a sample size of 74 would be sufficient (Faul et al. 2009; Field, 2013; Keesler, 2018). This sample size calculation resulted in the largest sample size for any of the research questions, so I needed a minimum of 89 participants for the study (Field, 2013; Jan & Shieh, 2019).

Procedures for Recruitment, Participation, and Data Collection

Recruitment

Upon approval from the institutional review board (IRB; approval no. 07-14-20-0597365), the study was posted as a research study announcement through the Walden Participant Pool (an electronic bulletin board used by the university to post studies), as well as social media resources (LinkedIn, Facebook, online/electronic bulletin boards, and human service listservs). Specific LinkedIn and Facebook pages that the recruitment announcements were posted on included:

- CyberVPM, managed by AL!VE, the volunteer program manager listserv from the United States specifically designed for volunteer program management and development (<https://groups.yahoo.com/group/cybervpm/>).
- AL!VE (http://www.linkedin.com/search-fe/group_search)

- Association of Volunteer Managers ((http://www.linkedin.com/search-fe/group_search))
- Forum for Volunteer Administrators (http://www.linkedin.com/search-fe/group_search).
- Volunteer Coordinators ((http://www.linkedin.com/search-fe/group_search)).
Volunteer Management Best Practices Network
(http://www.linkedin.com/search-fe/group_search).
- Volunteers of America
(https://www.facebook.com/pg/VolOfAmerica/posts/?ref=page_internal)
- Volunteer 365 (<https://www.facebook.com/volunteer365/>)
- Volunteer Match (<https://www.facebook.com/VolunteerMatch/>)
- Habitat for Humanity
(<http://www.habitat.org/?fbclid=IwAR195ntQrppk8m66YYdZxRfuHGuR3Xj5fqG6h6P1sxLzbDURSnk5pynBBCw>)

I reached out to the leader of each organization with an email explaining the study and purpose of the use of the listserv. Many of the Facebook groups are private and require justifying the purpose of joining the group and agreeing to terms of the group, which are specific to utilizing the group page appropriately and not for personal monetary gains. I received approval from several groups at the time of the study being initiated. If permission was not required, a screenshot indicating membership permission or the Facebook page as being public and not requiring permission was included in the IRB application for approval.

Data Collection

An electronic survey is both cost effective and accessible for many studies, allowing for data to be collected at greater speeds with a moderate response rate (Frankfort-Nachmias et al., 2015). Potential drawbacks to online surveys are with regard to a limited sampling frame, as not everyone has technology access and has decreased applicability to heterogeneous populations (Frankfort-Nachmias et al., 2015).

The announcement contained the link to the online survey housed in SurveyMonkey. Participants who clicked on the link were first be presented with inclusion and exclusion criteria questions. If they answered these questions in a way that indicated that they do not meet the participation inclusion criteria, they were sent to a webpage that thanks them for their willingness to participate but that they did not qualify to participate in the study. If they were qualified to participate, the next page was the informed consent.

Participants were then instructed to read the informed consent and answer a question at the end of the informed consent form indicating whether they agree. Participants were instructed to print or save a copy of the informed consent if they wished. The informed consent contained information about the study purpose, risks, and time requirements of the study as well as examples of some of the questions they would be asked. If they indicated that they agree then they were advanced into the next portion of the survey. If not, they were exited from the survey and thanked for their time.

The demographic survey (Appendix A) contained five questions specific to respondent characteristics. There were both multiple choice boxes and open answer boxes

for data entry such as for age or years. Participants were able to choose not to answer any questions on the form and continue with the survey. The second survey was the ACE-SF, which included each of the 10 questions written out with a *yes* or *no* selection at the end of each question (Appendix B; Felitti et al., 1998). The third survey was the ProQOL-5 CFS (Appendix C; Stamm, 2010).

The following list was offered as contact points in the event of adverse reactions to participation in the study specific to the ACE survey. The Suicide Prevention Lifeline is specifically for individuals who are a threat to themselves, the Crisis Text Line is a texting application that individuals can access from their phone if they are in psychiatric crisis/distress, and IMAlive is an online chat that allows individuals to chat if they are struggling psychiatrically. The National Alliance on Mental Illness (NAMI) is a national nonprofit organization that focuses on assisting individuals struggling with mental health needs and require assistance, and National Institute of Mental Health (NIMH) is the federal program for managing mental health programming and provides access for individuals seeking help (Writer, 2009). These were included in the informed consent and on the last page of the survey (Appendix C).

Instrumentation and Operationalization of Constructs

Demographic Form

The demographic form was created by me and included age, gender, ethnicity, education level, and number of years spent volunteering. The demographic form was developed based on Bureau of Labor Statistics (2016) with regards to current demographic data associated with volunteerism. This can be reviewed in Appendix A.

ACEs Survey

The ACE questionnaire has become a highly utilized assessment over the past several years across populations and professions to assess for health risk factors (Anda, Butchart, et al., 2010; Felitti et al., 1998; Keesler, 2018; Merrick et al., 2018; Teicher & Samson, 2016; Topitzes et al., 2016). ACEs have been found to be related to health and mental health issues in adulthood (Anda, Butchart et al., 2010; Felitti et al., 1998; Keesler, 2018; Merrick et al., 2018). From a biological standpoint, these traumatic experiences have a dose dependent effect in that the higher and more the number of traumas an individual experiences, the higher the probability that the individual will develop emotional effects later in life (Merrick et al., 2018; Murphy et al., 2014; Navalta et al., 2018; Teicher & Samson, 2016; Topitzes et al., 2016).

Question Structure. Each question is prefixed with “While you were growing up during your first 18 years of life” with a *yes* or *no* as the answer (Felitti et al., 1998). There is a total of 10 questions in the survey. There are three categories (subscales) of childhood abuse: physical abuse/neglect, which is defined as instances in which the individual was assaulted or injured by an adult, or physical needs not being met (two questions); psychological abuse, which is defined by verbal assaults, including humiliation and/or threats by an adult (two questions); and sexual abuse, which is defined as sexual contact/conduct by an adult (one question; Felitti et al., 1998; Kazeem, 2015). There are four categories specific to household dysfunction: mental illness (one question), violent treatment of mother/stepmother (two questions), exposure to substance use (one questions), and criminal behavior (one question) in the household (Felitti et al.,

1998). Each subscale is specific to the type of ACE the individual has experienced (abuse, household challenges, and neglect; Felitti et al., 1998). For this study, the overall score, and not subscale scores, were used.

Overall Score. The overall score of the tool is based on the number of “yes” answers to the 10 questions. For each answer of "yes" to a specific question, the question scores as 1. The overall score is a sum of the number of ACEs indicated on the instrument (Anda et al., 2010; Felitti et al., 1998; Kazeem, 2015). The score range total is 0 (unexposed) to 4 (exposure in all categories) (Felitti et al., 1998; Kazeem, 2015). A low ACE score (0-2) simply indicates that the individual has not had a higher incidence of ACEs and the dose dependent relationship of the score indicates that they are not at high risk for negative health outcomes. If the ACE score is in the 3-4 range, that indicates a high number of ACEs and indicates higher dose dependent risk of the individual having negative health issues, including higher potential for work-related issues (Anda et al., 2004; Felitti et al., 1998; Kazeem, 2015).

Reliability. Multiple researchers have examined the psychometric properties of the ACE survey in a variety of environments to establish both reliability and validity of the tool (Hardt & Rutter, 2004; Ilic et al., 2014; Kazeem, 2015; Meinck, et al., 2017). Kazeem (2015) examined the psychometric use of the survey in Nigeria. Psychometrically, a Cronbach’s alpha of .70 or higher is good (Hemsworth et al., 2017). With regards to questions related to family environment, parents/guardians, peer and community violence, the alpha coefficient for each item ranged from 0.65 to 0.81 (Kazeem, 2015). With composite scores in the 0.60 to 0.70, the instrument is considered

to be acceptable (Field, 2013; Ilic et al., 2014). Internal consistency, with the exception of demographics, was found to be 0.80 and Cronbach's alpha coefficients were found to be .80 and .91 (Kazeem, 2015). These alphas indicate high reliability in the instrument. Pearson correlations were performed between the ACE full survey and the international survey, finding a positive correlation, $r = +0.72$ that was statistically significant ($p < .01$). Similarly, Meinck and colleagues (2017) attempted to analyze the ACE short form (ACE-ASF) and found that constructs examining physical/emotional and sexual abuse had good criterion validity (39.7% for physical; 32.2.% emotional and 13.1% sexual) (Meinck et al., 2017). The strength of the correlations among sexual abuse and adverse outcomes, however, was smaller in comparison to physical/emotional abuse and adverse outcomes (0.83 internal consistency for sexual abuse and 0.57 for physical abuse) (Meinck et al., 2017).

Item difficulty, internal reliability, and item discrimination were similar psychometrically (Ilic et al., 2014; Meinck et al., 2017). Cronbach's alpha coefficient for internal consistency was measured at 0.69, which is acceptable, and item discrimination index was found to be satisfactory (Ilic et al., 2014). However, internal reliability was found to be poor (Ilic et al., 2014). Hardt and Rutter (2004) found that the internal consistency and reliability of the scales are satisfactory.

Construct Validity. U.S. and German researchers examined the construct validity of the instrument and found similar psychometric findings (Ilic et al., 2014; Meinck et al., 2017). Construct validity for the 15-item ACE tool was found to be moderately valid as an instrument. Construct validity with Cronbach's alpha ranges from 0.60-0.70, which is

acceptable (Ilic et al., 2014; Meinck et al., 2017). For this study, the ACE will be utilized due to its reliability and validity across both the US and other countries. Furthermore, it has less questions and the language can be applied to more than one educational level, which will be part of the demographic data collection. Appendix F shows the ACEs questionnaire that will be utilized for this study (Felitti et al., 1998).

ProQOL-5

The ProQOL-5 assessment is an effective tool in measuring CF. The term CF is utilized to capture the larger terms of burnout, STS disorder and vicarious trauma (Figley, 1995; Figley, 2002; Ludick & Figley, 2017). The ProQOL 5 was designed based on the CF Scale (CFS) developed by Stamm (2005). The developers utilized Cronbach's alpha, factor analysis and multigroup factorial invariance to maintain and improve the reliability of the assessment. It has three subscales of compassion satisfaction, burnout, and CF (Stamm, 2005). Each question is anchored with a 6-item Likert scale (0=never; 1=rarely; 2=a few times; 3=somewhat often; 4=often; 5=very often). The score is a sum of the item responses for each subsection though the subscale scores are not combined to compute a total score (Bride & Radey, 2007; Stamm, 2005). Scores for the subscale of CF/ scale of above 17, which is going to be utilized for this study, indicates that CF exists (Bride & Radey, 2007). Cronbach's alpha demonstrates the internal consistency of the instrument, which speaks to the reliability of the tool (Hemsworth et al., 2017). In the case of the ProQOL 5, the reliability on the Cronbach's alpha is $>.70$, which indicates above average reliability for the tool, while construct reliability between items are "Compassion Satisfaction alpha = .87, Burnout alpha = .72 and CF alpha = .80" (Stamm, 2005, p. 8).

Generally, a Cronbach's alpha of .70 or higher is good (Hemsworth et al., 2017) therefore the reliability across the instrument is good. Ortlepp and Friedman (2002) had similar reliability measurements for the CFS, now ProQOL 5. Hegney, Craigie, Hemsworth, Osseiran-Moisson, Aoun, Francis, & Drury (2014) utilized the ProQOL 5 in their mixed method study, further resulting in high reliability of the assessment tool. Their findings further supported the construct validity of the instrumentation. Bride & Radey (2007) indicate that convergent validity may not be supported. Stamm (2005, 2010) indicates that the discriminant validity of the subscales measures different constructs, lending to the efficacy of having utilized the subscale for the measurement of CF in this study.

In this instance, the CF subscale was utilized for this study, as there was incorporation to measure both CF as well as compassion satisfaction, and it emphasizes the criteria utilized to define STS (Stamm, 2010). This was further indicated as the scale serves to extract both primary, or direct, trauma and secondary, or indirect trauma, which volunteers are routinely exposed to (Stamm, 2010). Additionally, this served to provide rich information further contributing to the correlation between ACEs and CF. This is outlined further in Appendix G.

Operationalization of Constructs

This study required the collection of several quantitative variables. An explanation for each type of variable and how they were coded can be found in Table 1.

Table 1*Variables and Coding*

Research Question	Data Analyses	Variable Type	Variable Name	Variable Categories	Coding
1 & 3	See DV for RQ 1 & 3	Independent	Gender	Male	0
				Female	1
				Prefer not to answer (excluded from analyses)	99
			Ethnicity	Caucasian/White	0
				African American/Black	1
				Hispanic/Latino	2
				Native American/American Indian	3
				Asian/Pacific Islander	4
				Other	5
				Prefer not to answer (excluded from analyses)	99
			Age (18+)	Actual reported age	Actual Age in years
			Years & Months Volunteering	Actual reported years & months	Will be converted to number of months
			Education Level	No HS	0
				High school graduate, diploma or equivalent	1
Associate degree	2				
Bachelor's degree	3				
Master's degree	4				
Doctorate degree or more	5				
Prefer not to answer (excluded from analyses)	99				
1	Multiple linear regression	Dependent	10 question Compassion fatigue as measured by the Professional Quality of Life (ProQOL 5) – raw score	Score on ProQOL 5 (0-45) 22 or less (low) Between 23 and 41 (average) 42 or more (high)	0 1 2

(table continues)

Research Question	Data Analyses	Variable Type	Variable Name	Variable Categories	Coding
2	Simple linear Regression	Independent	ACEs	No ACEs	0
				One ACE	1
				Two ACEs	2
				Three ACEs	3
				Four or more ACEs	4
3	ANCOVA (including demographics)	Covariate	ACEs	22 or less (low)	0
				Between 23 and 41 (average)	1
				42 or more (high)	2
		Dependent	ProQOL-5 (10 questions CFS) – raw score	Range	0-4
		Dependent	ProQOL-5 CFS – raw data	Score on CFS	0-45

Note. ACE = adverse childhood experience, ProQOL CFS = Professional Quality of Life Compassion Fatigue Scale

Data Analysis Plan

The software utilized for data analysis was IBM Statistical Package for Social Sciences (SPSS) software version 27. All original data was stored on SurveyMonkey and downloaded and stored on the researcher's computer protected with encryption. Data will be deleted from SurveyMonkey once the final dissertation is approved, and the researcher graduates. All data will remain stored electronically on computer for five years.

Data Cleaning

The data was downloaded and checked against the results in Survey Monkey. Missing data and outliers were checked in order to avoid data errors (Hellerstein, 2008). Prior to any data being entered into the study, it was imperative that data errors resolved between the initial data acquisition to archival so that errors do not impact the findings and therefore the authenticity of the study (Hellerstein, 2008). Outlier detection and

checking for missing data were imperative to ensure the study remains valid (Hellerstein, 2008).

Descriptives

Frequencies of the responses from the participants for demographic items is provided. In addition, frequencies of score categories for the ACEs and ProQOL is provided in chapter 4. This information is provided to give understanding of the demographics of the individuals who participated in the study and to take into consideration when attempting compare the results of this study to the work of previous researchers.

T Tests

Independent t-tests are utilized to determine any statistical significance between two groups. Analyses using t-Test serves to determine whether there is a statistically significant difference in the dependent variable between the two groups in the independent variables (such as males versus females) (Frankfort-Nachmias et al., 2015). This allows for the researcher to determine if there are any statistically significant differences between groups which will provide a deeper understanding of the sample

Multiple Linear Regression

This statistical analysis was used for Research Question 1 where the independent variables for this question are demographics (gender, ethnicity, age, years volunteering and education level) and the dependent variable is CF as measured by the ProQOL-5. Multiple linear regression is used to determine if there are statistically significant relationships between multiple independent variables and one dependent variable (Jan &

Shieh, 2019). The statistical test will determine if there is a statistically significant ($p < .05$) relationship between the variables or not. This specific analysis is utilized when the dependent variable is linear rather than binary (Frankfort-Nachmias et al., 2015)

Simple Linear Regression

This analysis was used for Research Question 2 as the independent variables for this question is ACE scores and the dependent variable is ProQOL-5 CF scores. This analysis allows the data to reflect the relationship between one independent variable with one dependent variable (Field, 2013). The statistical test determines if there is a statistically significant ($p < .05$) relationship between the two variables or not. For this study, this metric was completed as a means by which to explore the statistical relationship between ACEs as measured by the ACE and CF as measured by the ProQOL-5.

ANCOVA

ANCOVA was used for Research Question 3 as it allows the researcher to determine differences between two groups with the ability to control for covariates. It is a combination of two-way analysis of variance with linear regression. For this study, as there are multiple independent variables (demographics), one covariate (ACEs as measured by the ACE-SF) and one dependent variable (CF as measured by the ProQOL-5), ANCOVA is strongly indicated (Field, 2013; Frankfort-Nachmias, et al., 2015). The ANCOVA allows the researcher to observe the interactions between the variables (Frankfort-Nachmias, et al., 2015).

Threats to Validity

In quantitative research designs there are several threats to validity that need to be considered. Internal validity of the design specifically refers to whether the design is valid. It questions whether there is a relationship between the independent variable and dependent variable. External validity is specific to whether the study results are generalizable (Frankfort-Nachmias et al., 2015). There are eight internal validity threats: history, maturation, statistical regression, selection, testing, attrition/mortality, instrumentation, and selection-maturation interaction (Mertler, 2018).

Internal Threats to Validity

Respondent history may have played a role in internal validity. One variable to possibly control for was with respect to the length of time that individuals have been volunteering. Those who have worked as volunteers for longer periods of time compared to those who have worked for shorter periods may have skewed the results of their CF. Maturation was not a threat to this study as it was not a longitudinal study (Frankfort-Nachmias et al., 2015).

Statistical regression was a possibility as a function of instrumentation (Shadish et al., 2002). Inconsistencies in instrumentation creates a threat to internal validity (Shadish, et al., 2002). For this study, and due to the instrumentation, there was potential for this to be a threat. Selection was a threat to this study as a function of the population being utilized for this study as well and may not be fully representative of the sample attempting to be studied (Frankfort-Nachmias et al., 2015). Testing (Creswell, 2009), evaluation apprehension, hypothesis guessing (Trochim, 2006) were threats to validity.

Evaluation apprehension can be described as the participant experiencing anxiety related to the study and this has the potential to impact the results (Creswell 2009), including the possibility of nonresponse error, in which the individual chooses not to respond to the survey once it has begun (Frankfort-Nachmias et al., 2015). Hypothesis guessing in which the responder is able to guess the hypothesis of the study, may be an inevitable threat to the validity of the study as it requires full disclosure of the study and purpose and the individual may have had an understanding of what the surveys are assessing for based on the nature of wording and potentially response set in which the individual may have answered survey questions for ProQOL and ACE-SF with a specific direction based on the topic, particularly in the case of ACE-SF (Frankfort-Nachmias et al., 2015). Additionally, the nature of all the measuring scales were simple and direct in language, therefore giving the participants clear insight with respect to what the study was attempting to measure (Creswell, 2009; Kazeem, 2015; Stamm, 2010). Additionally, some participants may have perceived survey questions as threatening questions, particularly ACE-SF, which is specific to trauma. Threatening questions are specific to private issues, such as illegal behaviors or past trauma. Due to the nature of the study design and the instrumentation utilized, the factors assessed may have become apparent to the subjects, therefore causing them to adjust their responses, also known as hypothesis guessing and is explored further in internal threats (Frankfort-Nachmias, et al. 2015). This can further lead to response bias in which the respondents may deny or underreport trauma (Frankfort-Nachmias et al., 2015). This was a significant threat to this study.

Selection maturation was not a strong threat to this study as was performed in a time-sensitive manner and was not a longitudinal study (Shadish et al., 2002).

External Threats to Validity

External validity has three threats: population validity, personological validity, and ecological validity (Mertler, 2018). One of the primary external validity threats to this study was with respect to potential participants having limited access to computers and the internet (Frankfort-Nahmias et al., 2015). While surveys that are internet-based are cost-effective and convenient, it does post a threat to losing individuals who may be eligible for the study but do not have access to the survey (Frankfort-Nachmias et al., 2015). As the sample was being recruited through electronic methods, individuals who are not familiar with or have access to these forms of media may not have responded to the survey.

Purposive convenience sampling and snowball methods also add risks to external validity due to potential selection bias (Frankfort-Nachmias et al., 2015; Shadish et al., 2002). Selection bias means that the sampling is not random, and people choose whether they want to participate and had the potential to indicate skewed results as people who self-select may have been individuals who have fewer or no ACES in their history. Those who have experienced ACES may not want to think about those experiences and may have chosen not to participate.

Ethical Procedures

Before recruitment of participants began, I applied for IRB approval for the study through Walden University. The IRB evaluated the study to determine value and risk to

respondents as well as ensure that there are not possibilities for coercion (Frankfort-Nachmias, et al., 2015). This application included the recruitment materials (see Appendix C), agreements from listservs and other electronic formats to post the study (see Appendix A and B), consent form (see Appendix D), and the data collection instruments (see Appendices E, F and G).

No individuals from vulnerable populations were specifically recruited. However, since the researcher had no contact with participants (online survey), the researcher did not know if the individual is from any of vulnerable populations such as pregnant women, individuals with mental or emotional impairments, individuals with physical impairments, etc. I did not have any relationship or contact with respondents unless they contact me with concerns (see informed consent, Appendix D) and I did not be recruiting individuals I know to participate. Due to the fact that the survey for this study requests answers to personal questions that may be perceived as invasive, the informed consent form includes examples of these items, indicates that the participant may cease participation at any time, and resources will be provided to all participants in the informed consent form (see Appendix D and H) as well as when they exit the survey (if they do not qualify for the study and when completing the survey, see Appendix H). These resources will include but not be limited to the National Suicide Prevention Hotline, National Alliance for Mental Illness, and MentalHealth.org (Appendix I).

The informed consent provided the full context of the study, establish to the participants what the purpose of the study is, and informed them of the risks associated with participation (Appendix D). Procedures were listed in detail with a full description

of potential discomfort, benefits of participation, disclosure of what will occur with the data being collected, further information around contacting the researcher, and instructions around withdrawing from the study (Frankfort-Nachmias et al., 2015). At the end of the informed consent form, a question was asked regarding if they agree to the informed consent or not. This question required an answer. If they indicated “no” they will be exited from the study. If they answered “yes” they went onto the demographic form. No names or other specific identifying information (such as emails) were collected from participants, so the data is anonymous.

Summary

This study is a quantitative correlational cross-sectional design with the primary goal of exploring any potential relationship between ACEs (Kazeem, 2015), demographic variables, and CF as measured by the ProQOL-5 with the specific subset of questions from the CFS among volunteers in nonprofit human service agencies. Utilizing simple linear regression, multiple linear regression and ANCOVA, as well as descriptive statistics, I hope to provide further insight with respect to any potential relationship and the degree of the relationship with respect to these variables. This study utilized purposive and snowball sampling through the Walden University Participant Pool, Facebook, and volunteer listservs with survey links to Survey Monkey. The Survey Monkey survey includes demographics, the ACE-SF survey and ProQoL-5. Chapter 4 will provide detailed results of the study upon completion and will include: data collection (including recruitment and time frame of data collection), discrepancies in the data, baseline descriptives, the sample and basic univariate analyses, descriptive statistics

specific to the sample, statistical assumptions and the findings with included tables and figures to illustrate the results.

Chapter 4: Results

The purpose of this study was to explore the relationship between demographic factors (age, gender, ethnicity, years volunteering, and education level) and CF as measured by the ProQOL-5 CFS in those who volunteer (Research Question 1). In addition, I determined the relationship between adverse childhood trauma experience as measured by the ACE-SF and CF as measured by ProQOL-5 CFS in those who volunteer (Research Question 2) as well as the differences between demographic factor groups (age, gender, ethnicity, years volunteering, education level) in CF as measured by the ProQOL-5 CFS in those who volunteer when controlling for adverse childhood trauma as measured by the ACE-SF survey (Research Question 3). In this chapter I discuss the data collection and results.

Data Collection

IRB approval was granted on July 14, 2020. The study was posted immediately on sites discussed in Chapter 3. In September 2020, it was learned that there was an error with the survey logic in SurveyMonkey with respect to inclusion criteria and consent to participate. This was corrected and the study reposted with the initial responses to the survey being removed from the data set as the responses were incomplete.

In October 2020, despite weekly study postings and continued posting on the Walden Participant Pool website, approximately 43–49% of the results were partial completions and/or disqualified. There were 100 responses with 50% completion rate, indicating that the response total had plateaued at 49 responses. I requested an expansion of data gathering sites through social media to include additional sites from the IRB on

October 10, 2020. This was approved by the IRB on October 22, 2020, and the study was posted across these additional sites:

- Being Volunteer (<https://www.linkedin.com/groups/8294048/>)
- Association for Health Care Volunteer Resources
(<https://www.linkedin.com/company/association-for-healthcare-volunteer-resource-professionals-ahvrp/posts/?feedView=all>)
- Volunteer Jobs, Volunteer Coordinator and Director Jobs
(<https://www.linkedin.com/groups/3427997/>)
- Volunteer Match (<https://www.linkedin.com/groups/4766210/>)
- Volunteer Firefighters (<https://www.linkedin.com/groups/53955/>)

As of December 31, 2020, there were 90 completed surveys, which was sufficient to ensure statistical power. The data were downloaded from SurveyMonkey, and missing data and outliers were checked to avoid data errors (Hellerstein, 2008). Five of the surveys were manually removed from the data set due to missing data that was needed. This left a total of 85 responses to the survey. I used G*Power to check the statistical power for this sample size and ran a linear multiple regression (t test, fixed model, single regression coefficient), a priori with effect size f^2 of 0.15, alpha error probability of 0.05, power of 0.95, and 2 predictors. The needed sample sizes to ensure the statistical power were 74 (one tail) to 89 (two tails). Therefore, a sample size of 85 provided the desired statistical power for the study. I communicated this information to my committee, and they approved the discontinuation of data collection.

When cleaning the data, I realized that the last item on the ACE-SF had not been included in the survey (Question 10: Was a household member depressed or mentally ill or did a household member attempt suicide?). A Cronbach's alpha calculation was completed using the score of the nine of 10 questions to determine if the ACE-SF was still a reliable instrument or if a new set of data would need to be collected. A Cronbach's alpha of .70 or higher for the ACE-SF is considered acceptable (Hemsworth et al., 2017; Kazeem, 2015). The scale with only 9 of the 10 items had a calculated Cronbach's alpha of .781, which indicates a moderate to high level of internal consistency.

Furthermore, the final rating item for the ProQOL-5 CFS for "very often (5)" was omitted during survey development due to researcher oversight. I calculated the Cronbach's alpha with the data collected to determine if the scale was still reliable with the omitted response option. The data with the omitted Likert response option had a Cronbach's alpha of .861, which indicates a high level of consistency. Therefore, it was decided to continue with data analysis and determination of results with the dataset that existed. This issue will also be addressed as a limitation in Chapter 5.

Results

Descriptive Statistics

The descriptive statistics described in this next section are demographic information specific to the sample of volunteers who participated in the study. The additional descriptive statistics provided are specific to the metrics with respect to ACE-SF scores and ProQOL-5 CFS scores. Frequencies of responses on the instruments are

provided for the sample as well as the internal reliability of the instruments as used for this study.

Demographics

Of the 85 respondents, most were female (94.2%), White/Caucasian (64.0%), and 93% had an Associate degree or higher. The mean number of months of volunteer time (in months) was 60 months, and the majority reported volunteering between 24 to 47 months (24.7%). The mean age of respondents was 40 and most of the sample were between 30–39 years of age (32.9%; volunteer time and age were categorized into ranges in order to simplify reporting of sample demographics but were reported age in original data collections so means and other analyses could be performed). Table 2 provides outlined detailed list of frequencies in each demographic group. Actual number of months volunteering and age were used for some analyses, and the range categories were used for others.

Table 2*Frequency of Sample Demographics (N = 86)*

Variable	Variable Category	Percent
Gender	Male (<i>n</i> = 4)	4.7
	Female (<i>n</i> = 81)	94.2
	Prefer not to answer/Missing (<i>n</i> = 1)	1.2
Ethnicity	Caucasian/White (<i>n</i> = 55)	64.0
	African American/Black (<i>n</i> = 17)	19.8
	Hispanic/Latino (<i>n</i> = 6)	7.0
	Native American/American Indian (<i>n</i> = 0)	--
	Asian/Pacific Islander (<i>n</i> = 4)	4.7
	Other (<i>n</i> = 0)	--
	Prefer not to answer/Missing (<i>n</i> = 4)	4.7
Age range	18–29 (<i>n</i> = 13)	15.3
	30–39 (<i>n</i> = 28)	32.9
	40–49 (<i>n</i> = 20)	23.5
	50–59 (<i>n</i> = 16)	18.8
	60+ (<i>n</i> = 8)	9.4
Volunteer time (months) (M = 60.0)	Less than 1 year (<i>n</i> = 6)	5.9
	12 to 23 months (<i>n</i> = 11)	12.9
	24 to 35 months (<i>n</i> = 12)	14.1
	36 to 47 months (<i>n</i> = 9)	10.6
	48 to 59 months (<i>n</i> = 5)	5.9
	60 to 71 months (<i>n</i> = 6)	7.1
	72 to 83 months (<i>n</i> = 2)	2.4
	84 to 95 months (<i>n</i> = 2)	2.4
	96 to 107 months (<i>n</i> = 2)	2.4
	108 to 119 months (<i>n</i> = 1)	1.2
	120 to 155 months (<i>n</i> = 9)	10.6
	156 to 191 months (<i>n</i> = 10)	11.8
	192 to 227 months (<i>n</i> = 0)	--
	228 to 265 months (<i>n</i> = 6)	7.1
264 or more months (<i>n</i> = 5)	5.9	
Education level	High school graduate, diploma or equivalent (<i>n</i> = 4)	4.7
	Associate Degree (<i>n</i> = 10)	11.6
	Bachelor's Degree (<i>n</i> = 37)	43.0
	Master's Degree (<i>n</i> = 29)	33.7
	Doctorate (<i>n</i> = 4)	4.7
	Prefer not to answer (<i>n</i> = 1)	1.2
	Missing (<i>n</i> = 1)	1.2

The respondents for this study were representative and proportional to the larger population with respect to the demographics of volunteers working in nonprofit agencies across the United States. The demographics of the sample were reflective of the demographics of the larger population serving in nonprofit agencies and across several varying bodies of nonprofit service. A comparison between the demographics of the study sample and national sample reported by Bureau of Labor Statistics (2016) can be found in Table 3.

Table 3

Comparison of Study Sample to Bureau of Labor Statistics Sample

Demographic Group	Study Sample Percent ($n = 85$)	BLS (2016) Percent ($n = 62,623$)
Female	95.2%	57.7%
White/Caucasian	64.7%	83.0%
Associates Degree and Higher	94.1%	86.7%
Months Volunteering (Mean)	60.0	NA
Age (Mean)	40.0	NA
Age Range	30-39 Years: 32.9%	35-44 Years: 28.9%

Note. Data from Bureau of Labor Statistics U.S. Department of Labor, 2016 (<https://www.bls.gov/news.release/volun.nr0.htm>)

ACE-SF Responses & Total Score

Response Frequencies. As indicated, when constructing the survey for this study, the 10th item of the ACE-SF was omitted in error. A Cronbach's alpha of .70 or higher for the ACE-SF is considered acceptable (Hemsworth et al., 2017; Kazeem, 2015), and the scale with only nine of the 10 items had a calculated Cronbach's alpha of .781, which indicated a moderate to high level of internal consistency. Table 4 contains the response frequencies on the ACE-SF.

Table 4*Frequency of Responses for ACE-SF (N = 85)*

Item	Question	No (n, %)	Yes (n, %)
1	Did a parent/guardian in the household often: Swear at you, insult you, put you down, or humiliate you? or Act in a way that made you afraid that you might be physically hurt?	45 (52.9%)	40 (47.1%)
2	Did a parent/guardian in the household often: Push, grab, slap, or throw something at you? or Ever hit you so hard that you had marks or were injured?	54 (63.5%)	32 (36.5%)
3	Did an adult or person at least 5 years older than you ever: Touch or fondle you or have you touch their body in a sexual way? or Try to or actually have oral, anal, or vaginal sex with you?	59 (69.4%)	26 (30.6%)
4	Did you often feel that: No one in your family loved you or thought you were important or special? or Your family didn't look out for each other, feel close to each other, or support each other?	60 (70.6%)	25 (29.4%)
5	Did you often feel that: You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? or Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?	73 (85.9%)	12 (14.1%)
6	Were your parents ever separated or divorced?	48 (56.5%)	38 (43.5%)
7	Was your mother or stepmother: Often pushed, grabbed, slapped, or had something thrown at her? or Sometimes or often kicked, bitten, hit with a fist, or hit with something hard? or Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?	70 (82.4%)	16 (17.6%)
8	Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?	46 (54.1%)	40 (45.9%)
9	Did a household member go to prison?	78 (91.8%)	7 (8.2%)
10	Was a household member depressed or mentally ill or did a household member attempt suicide?	Omitted	Omitted

*Item 10 of the ACE-SF was omitted by error at the time of the survey development and is therefore not included in the final results.

ACE-SF Total Score. The overall score on the ACE-SF is the sum of items with *yes* responses (Anda, et al., 2010; Felitti et al., 1998; Kazeem, 2015). The score range is 0 (unexposed) to 4 or more (exposure in several categories; Felitti et al., 1998; Kazeem, 2015). Table 4 illustrates the percentage of raw and coded scores. Of the sample of 85 participants, 55.3% had scores in the low range (0–2), whereas 44.7% scored high (3 or higher; see Table 5).

Table 5

Frequency of ACE-SF Total Score (N = 85)

Total Score	Frequency Number (%)
0 (<i>n</i> = 19)	22.4
1 (<i>n</i> = 14)	16.5
2 (<i>n</i> = 14)	16.5
3 (<i>n</i> = 9)	10.6
4 or more (<i>n</i> = 29)	34.1

Association Between Sample Demographics and Mean Total Scores.

Independent *t* tests were completed to analyze specific demographic information (gender, ethnicity, and education) with ACE-SF (0–4) total score. This was done to provide additional information about the sample and was not used to answer any research questions.

Gender (Males vs. Females). An independent *t* test analysis was completed to determine if there was a statistically significant difference in ACE-SF mean scores between males and females. The Levene's test for equality of variance were assumed to be equal ($p = 0.463$). The difference in the ACE-SF total score between males and females was not statistically significant ($p = .168$).

Ethnicity (White vs. Non-White). An independent *t* test analysis was completed to determine if there was a statistically significant difference in the mean total score of the ACE-SF between White and non-White respondents. The Levene's test for equality of variances was assumed to be equal ($p = 0.86$). There was no statistically significant difference in the ACE-SF total score mean between White and non-White participants ($p = 0.81$).

Education Level (High School vs. College). An independent *t* test analysis was completed to determine if there was a statistically significant difference in the mean total score of the ACE-SF between those who reported high school and college education levels. The Levene's test for equality of variances was assumed to be equal ($p = 0.70$). There was no statistically significant difference in the ACE-SF total score mean between high school versus college educated participants ($p = 0.65$).

ProQOL-5 CFS Responses and Total Score

ProQOL-5 CFS Frequencies. The ProQOL-5 CFS was designed based on the scale developed by Stamm (2005) and is a quantitative means of measuring the experience of symptoms associated with CF. A reliability analysis on the ProQOL-5 CFS, which consisted of 10 questions, revealed a Cronbach's alpha of .861, which indicates a high level of internal reliability (Hemsworth et al., 2017; Stamm, 2005). Table 6 illustrates the frequencies and percentages for the CFS.

Table 6*Frequency of Responses on Professional Quality of Life-5 Compassion Fatigue Subscale*

Item	Question	Never 0	Rarely 1	A Few Times 2	Somewhat Often 3	Often 4	Very Often 5
1	I am preoccupied with more than one person I [help]	5 (59%)	16 (18.8%)	32 (37.6%)	21 (24.7%)	11 (12.9%)	Omitted
2	I jump or am startled by unexpected sounds	9 (10.6)	25 (29.4%)	31 (36.5%)	11 (12.9%)	9 (10.6%)	Omitted
3	I find it difficult to separate my personal life from my life as a helper	13 (15.3%)	26 (30.6%)	22 (25.9%)	18 (21.2%)	6 (7.15)	Omitted
4	I think that I might have been affected by the traumatic stress of those I help	14 (16.5%)	31 (36.5%)	33 (38.8%)	5 (5.9%)	2 (4.7%)	Omitted
5	Because of my helping, I have felt "on edge" about various things.	14 (16.5%)	31 (36.5%)	29 (34.1%)	9 (8.2%)	2 (4.7%)	Omitted
6	I feel depressed because of the traumatic experiences of the people I [help].	28 (32.9%)	25 (29.4%)	28 (32.9%)	3 (3.5%)	1 (1.2%)	Omitted
7	I feel as though I am experiencing the trauma of someone I have [helped].	36 (42.4%)	19 (22.4%)	21 (24.7%)	8 (9.4%)	1 (1.2%)	Omitted
8	I avoid certain activities or situations because they remind me of frightening experiences of the people I [help].	47 (55.3%)	22 (25.9%)	13 (15.3%)	2 (2.4%)	1 (1.2%)	Omitted
9	As a result of my [helping], I have intrusive, frightening thoughts.	49 (57.6%)	23 (27.1%)	11 (12.9%)	1 (1.2%)	1 (1.2%)	Omitted
10	I can't recall important parts of my work with trauma victims.	53 (62.4%)	19 (22.4%)	11 (12.9%)	2 (2.4%)	0	Omitted

***Scale item Very Often (5) of the ProQOL 5 Compassion Fatigue Scale was omitted by error at the time of the survey development and is therefore not included in the final results. Cronbach's alpha of .861 which indicates a high level of internal reliability*

ProQOL-5 CFS Total Score. The ProQoL-5 CFS scores were coded as 0-22 (low), 23 to 41 (average), and 42 or more (high) for statistical analyses (Bride & Radey, 2007). Forty-one (46.5%) had a score between 0-22, and 45 (52.3%) had a score between 23-50). The actual mean CFS score for the sample was 22.73 (see Table 7). Due to surveyor error, the Likert item rated at very often (5) was omitted, therefore scores for the Pro-QOL-5 CFS total scores were no higher than 40.

Differences in Mean ProQOL-5 Total CFS by Sample Demographics.

Independent t-Tests were completed to determine differences between groups of specific demographic information (gender, ethnicity, and education) in the mean ProQOL-5 CFS total score. This was done specifically to provide additional information about the sample and was used to answer any research questions.

Gender (Males vs. Females). An independent t-test analysis was completed to determine if there was a statistically significant difference between males and females in the mean ProQOL-5 CFS total score. Levene's Test for equality of variances were assumed to be equal ($p = .059$). There was no statistically significant difference between males and females in the mean ProQOL-5 CFS total score ($p = 0.53$).

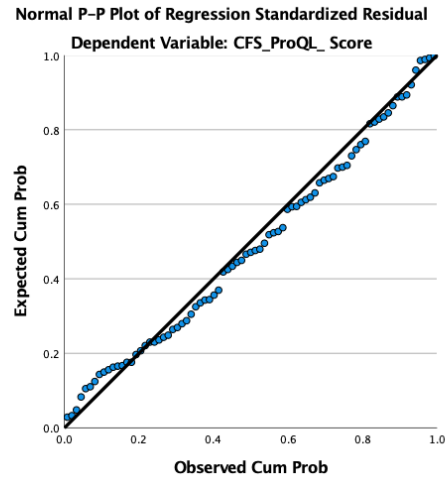
Ethnicity (White vs. Non-White). An independent t-test analysis was completed to determine if there was a statistically significant difference between White and non-White respondents in the mean ProQOL-5 CFS total score. Levene's Test for equality of variances were assumed to be equal ($p = .055$). There was no statistically significant difference between Whites and non-Whites in the mean ProQOL-5 CFS total score ($p = 0.25$).

Education Level (High School vs. College). An independent t-test analysis was completed in order to determine if there was a statistically significant difference between those with high school and college education levels in the mean ProQOL-5 CFS total score. Levene's Test for equality of variances were assumed to be equal at $p = .50$. There was no statistically significant difference between those who reported high school and college education levels in the mean ProQOL-5 CFS total score ($p = 0.34$).

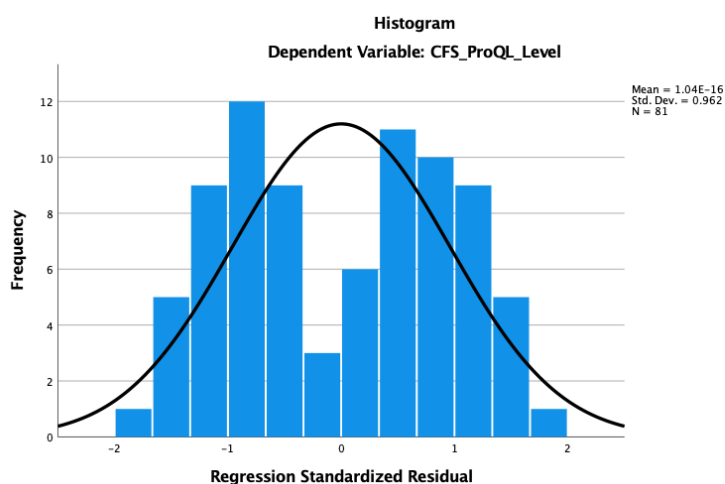
Assumption Testing

Multiple Linear Regression (Research Question 1)

Before completing a linear regression, it is important to ensure that the assumptions for the statistical test are met. The following are the assumptions of multiple linear regression and if they are met for research question 1. The assumption of a continuous dependent variable was met, as the dependent variable of CF subscale total score was continuous, ranging from 0-44. I also met the assumption of more than two independent variables. The third assumption—there must be a linear relationship between the independent variables and the dependent variables (Field, 2013)—was also met as there was a linear relationship noted (see Figure 2). Homoscedasticity, which indicates that the residuals are equal across all values of the predicted dependent variable (Laerd Statistics, 2015), was met as noted by Figure 2. Additionally, there are no significant outliers (Laerd Statistics, 2015), as indicated in Figure 2.

Figure 2*Linear Relationship of Research Question 1 Variables*

Multivariate normality, which indicates that there is normal distribution in the data set between the multiple independent variables and dependent variable (Field, 2013; Laerd Statistics, 2015), was met. Figure 3 shows the normal distribution across the data set between the independent variables and dependent variable, with a Durbin-Watson statistic of 1.79, therefore meeting this assumption.

Figure 3*Multivariate Normality*

Multicollinearity occurs when there are two or more independent variables that are highly correlated with each other and if this occurs a researcher needs to remove one or more variables from analyses in order to ensure it is not an issue (Laerd Statistics, 2015). The correlation table (Table 7) shows that there were no independent variables with a correlation larger than 0.7 and the tolerance and VIF were verified as well (no lower than 0.1 for tolerance value and VIF less than 10; Laerd Statistics, 2015). The table indicates that no independent variables were larger than .07 and the collinearity statistics for tolerance were above 0.1 with VIFs less than 10. Since there were no concerns related to multicollinearity, no variables needed to be removed from analysis (Table 7). Therefore, this assumption was met. Finally, the assumption of residuals (errors) being approximately normally distributed (Laerd Statistics, 2015) was met, as indicated in Figure 4.

Table 7*Correlation Table for Multicollinearity*

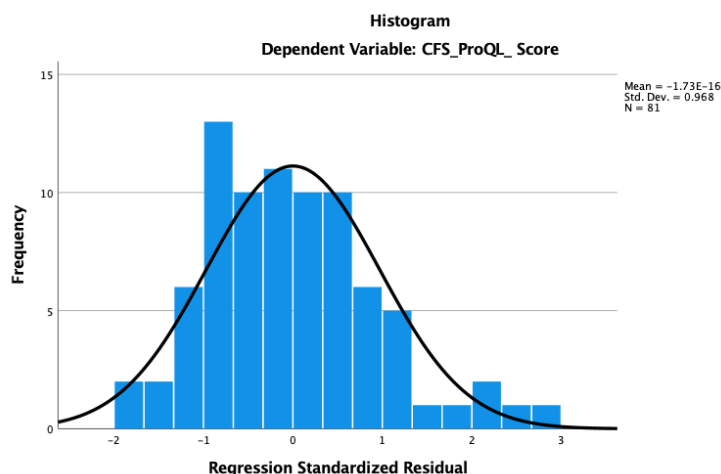
	Tolerance	VIF
Gender	0.943	1.060
Age	0.892	1.121
Ethnicity	0.963	1.039
Volunteer Time	0.869	1.150
Education	0.935	1.070
ACE-SF Total Score	0.932	1.073

Table 8*Pearson Correlation Between Professional Quality of Life-5 and Compassion Fatigue Total Score, Adverse Childhood Experience Total Score, and Demographics*

		Gender	Age	Ethnicity	Volunteer time (total))	Education	ACE-SF score
Pearson Correlation	ProQOL-5 CFS Score	.008	-.210	.265	-.211	.086	.261
	Gender		.026	-.102	.147	-.004	-.161
	Age			-.158	.258	-.011	.106
	Ethnicity				-.024	.006	-.043
	Volunteer time (total)					.189	-.048
	Education						.143
	ACE score						

Figure 4

Normal Distribution Between Independent Variables and Dependent Variable



Simple Linear Regression (Research Question 2)

To determine whether a simple linear regression is appropriate for an analysis, there are seven assumptions that need to be met (Laerd Statistics, 2015). First, the assumption that the dependent variable is continuous was met; CF as rated by ProQOL 5 CFS was the constant, or continuous, dependent variable for this study (scale of 0-40, mean of 22.73). Second, the assumption that the independent variable is continuous (Laerd Statistics, 2015) was met. The assumption that there is a linear relationship between the independent variables (ACE-SF) and dependent variable (CF as rated by ProQOL-5 CFS) was also met (see Figure 1).

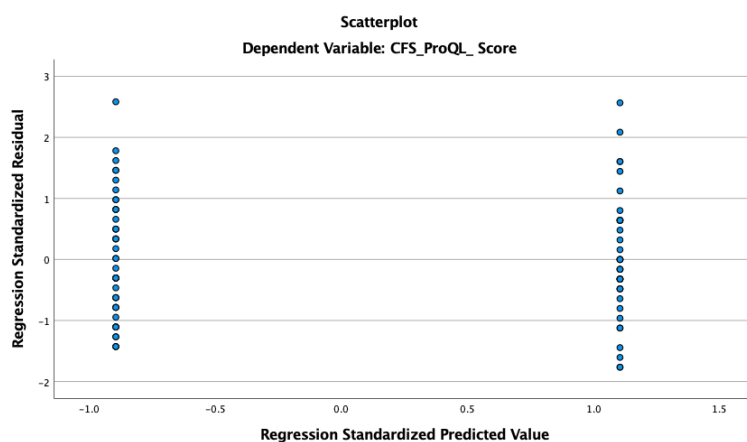
The fourth assumption of the simple linear regression is that observations are independent; essentially, the errors are independent (Laerd Statistics, 2015). This assumption was also met. To assess independence in errors, the Durbin-Watson statistic was evaluated. This statistic ranges from 0-4 and a value close to 2 is considered

desirable to indicate that there is no correlation between the errors. The Durbin-Watson statistic in this analysis indicated that there was independence of variables at 2.1, therefore this assumption was met.

The assumption that there are no significant outliers (Laerd Statistics, 2015) was also met. In this case, there were no significant outliers between the independent variables of ACE-SF (0-4) and CF as rated by ProQOL-5 CFS (0-44) as noted in Figure 5, so this assumption was met. Homoscedasticity (Field, 2013; Laerd Statistics, 2015), which indicates that variances across the independent variables are constant (Laerd Statistics, 2015), was met as indicated in Figure 5 where it is noted that any variances for the independent variables of ACE-SF (0-4) were constant across the DV of CF as rated by ProQOL-5 CFS (0-44).

Figure 5

Interaction Between Adverse Childhood Experience and Compassion Fatigue

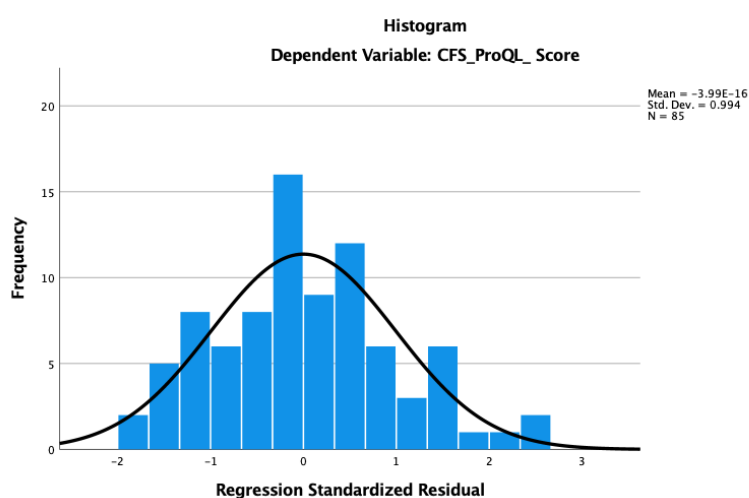


The errors (residuals) of the regression line have normal distribution (Laerd Statistics, 2015) was another assumption that was met. The distribution of the data indicated that both homoscedasticity and the residuals of the regression met the

assumptions (Laerd Statistics, 2015). This is further noted in Figure 6 in which the distribution of the bell curve indicates that the data was normal across the dependent variable of CF as rated by ProQOL-5 CFS (0-44) and independent variables of ACE-SF (0-4). Therefore, linear regression was appropriate for this data set.

Figure 6

Distribution of Independent Variables and Dependent Variable



ANCOVA (Research Question 3)

ANCOVA was used for Research Question 3 as it allows the researcher to determine statistical differences between two groups with the ability to control for covariates (Field, 2013; Laerd Statistics, 2015). The assumption of a continuous dependent variable was met; the dependent variable of CF as rated by ProQOL-5 CFS was noted as continuous (scale of 0-42+, mean of 22.73). The assumption that the independent variables has two or more independent groups and is categorical (Field, 2013; Laerd Statistics, 2015) was also met. For this data set, the independent variables of demographics were categorical and independent while ACE-SF were continuous and

independent (scale of 0-4); therefore the second assumption was met. Additionally, the assumption of a continuous covariate was met, as ACEs is a continuous variable (scale of 0-4 with the continuous variable as the total score).

There is independence of observations (Laerd Statistics, 2015) was another met assumption. For this assumption, it was important to assess that there was no relationship between groups of the individuals participating in the study or between the groups themselves. This was considered a study design assumption and was not considered something measurable based on statistics. Because the interactions between participants was independent through the survey and respondents had no relationship between the groups, the assumption was met and the use of the ANCOVA was warranted (Laerd Statistics, 2015).

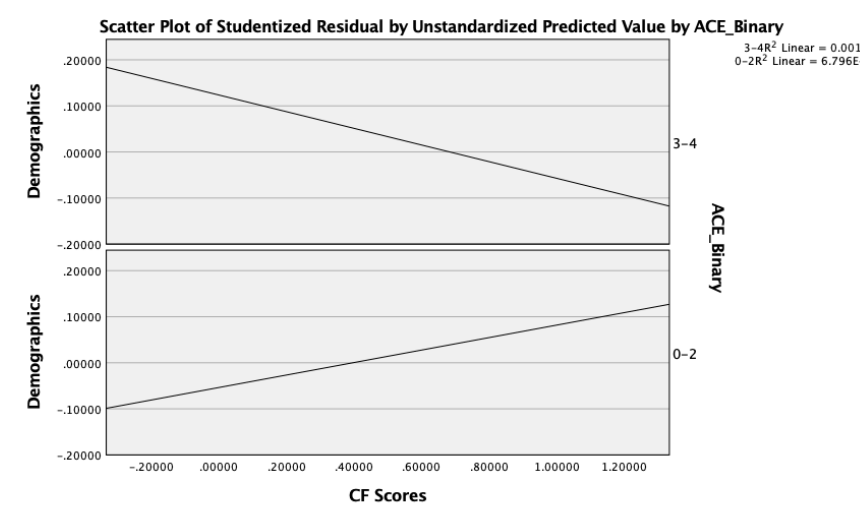
The data also met the assumption of a linear relationship between the covariate and dependent variable for each level of the independent variable (Laerd Statistics, 2015). For this assumption, a scatterplot was created for each level of the independent variables (gender, age, ethnicity, volunteer time and education) to assess whether there was a linear relationship between the covariate of ACE-SF and the dependent variable of CF as rated by ProQOL-5 CFS for each other independent variables (demographics). Each scatterplot indicated that there was a linear relationship between the dependent variable of CF as rated by ProQOL-5 CFS with the independent variables (gender, age, ethnicity, volunteer time and education), thus indicating that the assumption was met.

The assumption of homogeneity of regression slopes checking whether there is an interaction between the covariate and the independent variables (Laerd Statistics, 2015)

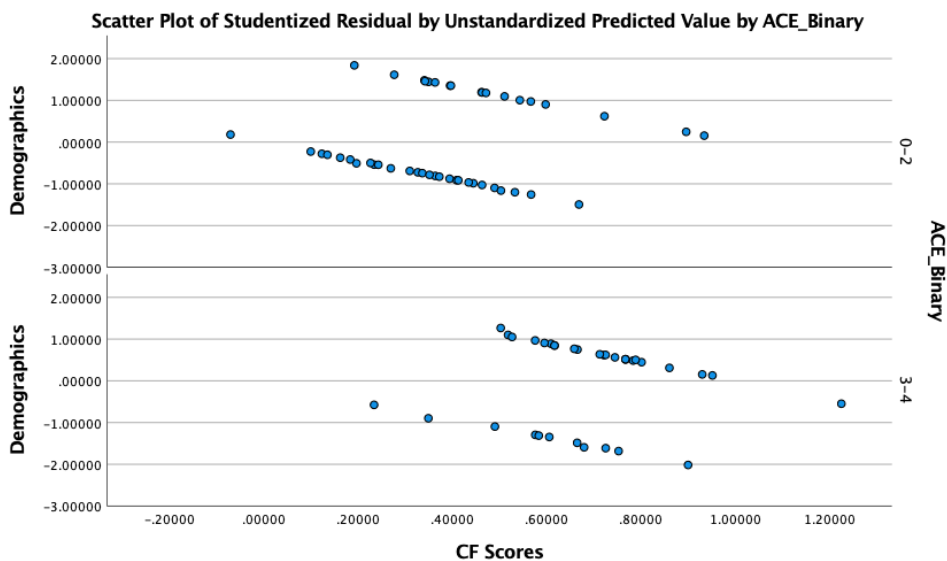
was also met. The standardized residuals for the interventions were noted in Figure 7. For each independent variable (gender, age, volunteer time, ethnicity, and education) and covariate of ACE-SF, it was observed that the slopes are linear in nature, which met the assumption based on visual assessment.

Figure 7

Demographics Interaction with Covariate for Homogeneity of Regression Slopes



Heteroscedasticity, which is specific to any variance of error is the same across the independent variables and covariates (Laerd Statistics, 2015), was also met. There was heteroscedasticity within the groups of the independent variables (gender, age, volunteer time, ethnicity, and education) across the covariate of ACE-SF as assessed by the group scatterplots as noted in Figure 8. There are no outliers in the combination of groups for the independent variables (Laerd Statistics, 2015) as another met assumption. There were no noted outliers as assessed in data set for each independent variable (gender, age, volunteer time, ethnicity, and education) as there were no cases with standardized residuals greater than +3 standard deviations as indicated in Figure 8.

Figure 8*Independent Variables with Covariate for Heteroscedasticity*

Homogeneity of variances, which indicates that the variance of error is the same for all combinations across the independent variables and covariate (Laerd Statistics, 2015), was violated. This assumption was reviewed by Levene's Tests of Equality of Error Variances. Levene's test is violated if it is at $p < .05$, which indicates there is no equal variances, indicating heterogeneous variances. For this, Levene's Tests of Equality of Error Variances had a $p = 0.00$, thus indicating that variances were not equal. Therefore, the assumption had been violated. It was imperative that the data be transformed for each group to assess for normal distribution. The data required transformation for all groups, in this case for the independent variables of gender, age, volunteer time, ethnicity and education as well as the covariate of ACE -SF to determine if the variances were homogenous. As a result, the dependent variable of CF as rated by ProQOL-5 CFS was transformed to determine the square root of the scores of the DV

with each independent variable (gender, age, volunteer time, ethnicity and education) with the covariate of ACE-SF. Upon visual assessment of the scatterplot for each independent variable (gender, age, volunteer time, ethnicity, and education) and covariate of ACE-SF, it was determined that there was moderately negatively skewed data.

The final assumption is that the dependent variable of CF is normally distributed for each group of the independent variable (gender, age, volunteer time, ethnicity, and education) and covariate of ACE-SF (Laerd Statistics, 2015). This assumption was visually assessed utilizing a histogram for normal distribution, and it was determined that this assumption was met.

Research Question 1 Results

A multiple linear regression was conducted to determine the relationship between demographic factors (age, gender, ethnicity, years volunteering, education level,) and CF as measured by the ProQOL-5 CFS in those who volunteer (Research Question 1).

The R^2 was calculated at .09, indicating that 9% of the variance in the dependent variable of CF is explained by the independent variables of gender, age, ethnicity, years volunteering, and education level. While this R^2 value is low, it does not mean that the model is not a good fit. As can be seen by the testing of assumptions, the assumptions were met for the statistical test so we were able to proceed with interpreting the results but needed to note that other elements may need to be considered in future research to determine if other variables influence the R^2 value.

Gender ($p=0.954$), age ($p=0.090$), volunteer time ($p=0.070$), and education ($p=0.167$) were not related to CF score at statistically significant levels (see Table 10).

However, ethnicity ($p=0.013$) was related to CF at a statistically significant level.

Therefore, the null hypothesis for research question 1 was retained, even though ethnicity was related at a statistically significant level, as all independent variables were not related to the dependent variable at statistically significant levels.

Table 9

Multiple Linear Regression Results for Research Question 1

	B	Std. Error	Standardized Coefficients Beta	<i>t</i>	Sig.
	24.061	4.812		5.000	0.000
Gender	-0.184	3.194	-0.006	-0.058	0.954
Age	-0.104	0.061	-0.187	-1.718	0.090
Ethnicity	1.782	0.697	0.269	2.557	0.013
Volunteer time (total)	-0.012	0.006	-0.203	-1.838	0.070
Education	1.069	0.766	0.147	1.395	0.167

Research Question 2 Results

A simple linear regression was completed to determine the relationship between ACE as measured by the ACE-SF survey and CF as measured by ProQOL-5 CFS in those who volunteer (Research Question 2).

The ACE-SF score was related to ProQOL-5 CFS score at a statistically significant level ($p = 0.003$). The R^2 was calculated at 0.099 which indicated there is a relationship between the score on the ACE-SF and ProQOL-5 CFS but it was not linear. When testing the assumptions associated with this research question, it was noted that the assumptions were met for the statistical test so the interpretation of the results remains

valid. However, in future research, other variables should be used in the analysis to determine if the additional of these variables influence the R^2 value. The null hypothesis for research question 2 was rejected and the alternative hypothesis was accepted as the relationship was statistically significant.

Research Question 3 Results

An ANCOVA was to determine differences between demographic factor groups (age, gender, ethnicity, years volunteering, education level) in CF as measured by the ProQOL-5 CFS in those who volunteer when controlling for adverse childhood trauma as measured by the ACE-SF survey (Research Question 3). There were no statistically significant differences in CF by gender ($p = 0.950$), ethnicity ($p = 0.337$), or education level ($p = 0.425$). Differences were found in CF were found for some volunteer time groups from other volunteer time groups, but these were not consistently statistically significant ($p = 0.79$ to 0.970). Those who volunteered between 36 to 47 months had statistically significant differences in CF from the other volunteer time ranges more often than any other volunteer time range (see table 10). This indicates that future researchers should try to delve into the length of time that individuals have volunteered to determine if there are experiences that occur at different times of the volunteer experience that may influence CF. Because not all differences between demographic factor groups (age, gender, ethnicity, years volunteering, education level) in CF when controlling for adverse childhood trauma were statistically significant, the null hypothesis for research question 3 is retained.

Table 10*Difference in Compassion Fatigue by Volunteer Time in Months*

Volunteer time in months	Mean Difference	Std. Error	Sig. ^d	95% Confidence Interval for Difference ^d	
				Lower Bound	Upper Bound
Less than one year (0-11 months)	9.333 ^{a,b,*}	4.085	.033	.839	17.828
12 to 23 months	4.083 ^{a,b}	3.129	.206	-2.424	10.590
24 to 35 months	6.426 ^{a,b,*}	3.000	.044	.186	12.665
48 to 59 months	4.958 ^{a,b}	3.718	.197	-2.773	12.690
60-71 months	6.133 ^{a,b}	3.623	.105	-1.402	13.669
72 to 83 months	11.833 ^{a,b,*}	5.064	.029	1.302	22.364
84 to 95 months	6.833 ^{a,b}	5.277	.209	-4.140	17.807
96 to 107 months	1.833 ^{a,b}	5.009	.718	-8.584	12.251
108 to 119 months	7.333 ^{a,b}	6.902	.300	-7.020	21.687
120 to 155 months	7.917 ^{a,b,*}	3.293	.026	1.068	14.765
156 to 191 months	9.208 ^{a,b,*}	3.081	.007	2.801	15.616
228 to 265 months	9.333 ^{a,b,*}	3.619	.018	1.806	16.860
264 or more months	9.333 ^{a,b,*}	3.614	.017	1.817	16.850

Summary

The only result that indicated that the null hypothesis should be rejected and the alternative accepted was for research question 2. A multiple linear regression was performed for research question 1 to determine if predicted outcomes between demographic factors (gender, age, ethnicity, volunteer time range and education level) and CF as measured by the Profession Quality of Life (ProQOL 5) CFS. The results of the multiple linear regression were varied, with the results indicating that ethnicity was the sole demographic that had a statistically significant relationship, thus upholding the null hypothesis as not all independent variables in the analysis were related to the

dependent variable at statistically significant levels except for ethnicity. A linear regression analysis was completed for Research Question 2 to determine if there was a statistically significant relationship between ACE-SF and CF as measured by the ProQOL-5 CFS. There is a statistically significant relationship between ACE-SF scores ($p = .005$) and ProQOL-5 CFS score but it was not linear in nature. The null hypothesis was rejected and the alternative accepted.

An ANCOVA was conducted for research question 3 to determine if there is a statistically significant relationship between CF rates as measured by ProQOL-5 CFS and demographic factor groups (age, gender, ethnicity, years volunteering, education level) in those who volunteer when controlling for ACEs. The ProQOL-5 CFS scores for individuals who had volunteered for 36-47 months were the only volunteer time range group that showed differences that were statistically significant with other groups in the independent variable. Therefore, the null hypothesis for research question 3 was retained. The next chapter further interprets the findings of this study while elaborating on future research directions as well as describing any implications for positive social change.

Chapter 5: Discussion, Recommendations and Conclusions

The purpose of this quantitative, correlational study was to investigate the relationships between demographic factors (gender, age, ethnicity, years volunteering, education level), ACEs, and CF in volunteers. This study addressed a research gap on potential factors that may be related to volunteer CF in the context of previous trauma histories and demographics. The results for Research Question 1 showed that gender ($p = 0.954$), age ($p = 0.090$), volunteer time ($p = 0.070$), and education ($p = 0.167$) were not related to CF score at statistically significant levels, though ethnicity was noted to have a statistically significant relationship to CF scale score ($p = 0.013$). The linear regression results for Research Question 2 revealed that there is a statistically significant relationship ($p = .003$) between ACE-SF scores and ProQOL-5 CFS scores, although that relationship is not linear in nature. Finally, there were no statistically significant differences in CF score by gender ($p = 0.950$), ethnicity ($p = 0.337$), or education level ($p = 0.425$). The ProQOL-5 CFS scores for individuals who had volunteered for 36–47 months were the only volunteer time range group that showed differences that were statistically significant with other groups in the independent variable ($p = 0.79$ to 0.970). Future researchers should try to delve into the length of time that individuals have volunteered to determine if there are experiences that occur at different times of the volunteer experience that may influence CF.

Interpretation of the Findings

Interpretation of Findings Related to Theoretical Framework

CF resilience theory provided the theoretical context to this study. The theory stipulates that the ongoing culmination of exposure to trauma while further experiencing other life stressors that may lead to CF (Ludick & Figley, 2017; Radey & Figley, 2007; Turgoose & Maddox, 2017). CF resilience theory is based on the CF model, which indicates that those with a deeper ability to express/experience empathy may have a higher vulnerability to STS and CF if they vicariously experience the trauma of others (Ludick & Figley, 2017). The longer and more serious the exposure to the trauma, the less resilient the individual becomes and thus the greater the CF level that can result (Ludick & Figley, 2017). Childhood trauma has been associated with higher rates of CF (Turgoose & Maddox, 2017). The findings of this study support the CF resilience model, which indicates that a history of trauma contributes to the development of CF as indicated in the statistically significant results of Research Question 2. There was a statistically significant relationship between the score on the ACE-SF, fitting the CF resilience theory model and previous research showing a relationship between ACEs and CF (Ludick & Figley, 2017; Turgoose & Maddox, 2017).

Other researchers have found that gender is related to CF rates with males being more resilient and therefore scoring lower on CF measures (O'Brien & Haaga, 2015). Though resilience is a component in CF resiliency theory (Ludick & Figley, 2017), it was not an element that was included and measured in this study. This makes it impossible to know how the level of resilience possessed by participants could influence the

relationship between the demographic variables, ACEs, and CF. It is recommended to include resilience as a variable in future studies to look at how the measured level of resilience could result in variances within the relationships between the variables with this study. This could also result in a better comparison between the results of the new study and what other researchers have found in the past.

Interpretation of Findings Related to the Literature

T-Test Analyses

Gender (Males vs. Females). An independent *t* test analysis was completed to determine if there was a statistically significant difference in ACE-SF mean scores between males and females, but the difference not statistically significant ($p = .168$). These results are consistent with previous findings, specifically with respect to noting that historically ACE-SF scores are equal across genders (Felitti et al., 1998; Kessler, 2018; Merrick et al., 2018). However, because the sample for this study was 94.2% female ($n = 86$), it is not possible to conclusively determine if the results of this study support previous findings. Additional studies should be completed with an overall larger sample, and a more equal distribution of males and females, to determine if the results of previous studies are upheld or contradicted.

Ethnicity (White vs. Non-White). There was no statistically significant difference in the ACE-SF total score mean between White and non-White participants ($p = 0.81$). This finding was in contrast with previous findings, in which there have been higher ACE-SF scores for non-Whites individuals (Felitti et al., 1998; Kessler, 2018; Merrick et al., 2018). However, consistent with previous findings (Stamm, 2010), there

were no statistically significant differences between Whites and non-White participants in the mean ProQOL-5 CFS total score ($p = 0.25$).

Education Level (High School vs. College). Further independent t tests on ACE-SF and education indicated no statistically significant difference in the mean total score of the ACE-SF between those who reported high school and college education levels. There was no statistically significant difference in the ACE-SF total score mean between high school versus college educated participants ($p = 0.65$). There was also no statistically significant difference between those who reported high school and college education levels in the mean ProQOL-5 CFS total score ($p = 0.34$). These findings are in contrast with previous findings on the ACE and education. Those with less education have been found to have higher ACE scores (Felitti et al, 1998; Keesler, 2018; Merrick et al., 2018).

Research Question 1

Previous researchers have had inconsistent results related to gender differences in CF (Baum et al., 2014; Howard et al., 2015; Sodeke-Gregson et al., 2013). My results did not indicate any statistically significant relationship between gender and CF ($p = .954$), but this could be because my sample was skewed to be primarily female (94.2%; $n = 86$). It is not possible to conclusively determine if the results support or contradict previous findings. Previous researchers have also found that CF is less prevalent in White individuals (Stamm, 2010). I did find a statistically significant relationship between ethnicity and CF ($p = .013$), although I did not find a statistically significant difference in CF between White and non-White participants when completing a t test ($p = .81$). This

indicates that the relationship between ethnicity and CF should be explored more fully in future research as it is important to have a better understanding of why this type of statistical disconnect may exist.

Research Question 2

The results of the analysis for Research Question 2 indicate a statistically significant relationship between ACE-SF scores ($p = 0.003$) and ProQOL-5 CFS score. This result supports what other researchers have found about the relationship between ACEs and CF (Figley, 1995; Killian, 2008; Ludick & Figley, 2017; Radey & Figley, 2007). Previous researchers have attempted to gain a deeper understanding of how trauma impacts the ability for those in helping professionals to continue to help others even if trauma and CF exists. Although I did find a statistically significant relationship between ACEs and CF, I did not look at the variable of resilience in my study. It would be important to measure this variable in future studies to determine if those with higher ACEs and higher measured resilience may have lower CF than is expected. It may be possible that the level of CF is lower for individuals with higher resilience even if they have the same experience with ACEs as others with differing levels of resilience.

Research Question 3

Previous researchers have focused primarily on ACEs and demographics (Anda, Butchart, et al., 2010; Felitti et al., 1998; Merrick et al., 2018), CF across demographics (Baum et al. 2014; Keesler, 2018; Murphy et al., 2014; O'Brien & Haaga, 2015; Pardess et al., 2013), or CF in the context of a specific profession (Adams et al., 2006; Bouchard & Rainbow, 2021; Howard et al., 2015; Killian, 2008), indicating no previous attempts to

control for ACEs while measuring CF across demographics. There were no statistically significant differences in CF by gender ($p = 0.950$), ethnicity ($p = 0.337$), or education level ($p = 0.425$). Differences were found in CF were found for some volunteer time groups from other volunteer time groups, but these were not consistently statistically significant ($p = 0.79$ to 0.970).

From a demographic variable standpoint, the results of this study are in contrast with these findings as well as it was learned that there were no remarkable differences between gender, age, education, or ethnicity. As noted, though the previous research on ACEs indicates clear differences between gender (Felitti et al., 1998; Merrick et al., 2018), ethnicity (Felitti et al., 1998; Merrick et al., 2018), and education (Felitti et al., 1998; Merrick et al., 2018), the findings of this study diverge from previous studies, warranting potential future exploration.

The findings of previous studies have been extended to the helping field over the past several years, where researchers have found that the number of ACEs experienced in childhood also are related to negative physical and mental health outcomes for helping professionals who experience vicarious trauma through serving their clients as well (Anda, Fleisher, et al., 2004; Bouchard & Rainbow, 2021; Howard et al., 2015; Murphy et al., 2014; Strait & Bolman, 2017; Teicher & Samson, 2016; Topitzes et al., 2016). The findings of this study with regard to exploring the statistical relationship between ACEs and CF is consistent with the previous findings (see Baum et al., 2014; Pardess et al., 2013). Moreover, the results regarding the relationship between ACEs and CF for volunteers in nonprofit organizations across demographics may indicate that the way

volunteers are responding to CF is consequential (Butler et al., 2018; Garner & Garner, 2011; Howard et al., 2015; Keesler, 2018; Scherer et al., 2016). Researchers have found that volunteers exposed to trauma are prone to developing CF, which these findings corroborate (Pardess et al., 2013). This study further serves to corroborate that both volunteers and mental health professionals with higher rates of CF have a history of trauma (Turgoose & Maddox, 2017). This serves to fill a gap in the research with respect to how volunteering, past trauma, and rates of CF have the potential to impact turnover rates in nonprofit agencies (Allen & Mueller, 2013; Chen & Yu, 2012; Scherer et al., 2016), therefore warranting further exploration.

Missing from this study was the inclusion of measuring of resilience. Resilience is an important part of the CF resilience theory and has been found to be related to one's ability to avoid CF even when experiencing trauma (Ludick & Figley, 2017; Radey & Figley, 2007; Turgoose & Maddox, 2017). Because this variable was not measured in this study, it is not possible to know if the level of resilience held by the participants in the sample would influence the relationship between the variables in this research question. It would also be important to control for measured resilience as well to determine if the differences in CF were statistically significant when controlling for both ACEs and resilience.

Limitations of the Study

There are several key limitations to this study. The primary limitation was with respect to the survey administration. During the building of the survey in SurveyMonkey (electronic survey platform), the final question for the ACE-SF was omitted in error

(Question 10: Was a household member depressed or mentally ill or did a household member attempt suicide?). In addition, the final item answer choice of “very often (5)” was omitted for the ProQOL-5 CFS in error. However, the ACE-SF Cronbach’s alpha was 0.781, allowing me to proceed with data analyses and interpretation. For the ProQOL 5-CFS omission, there were several options with regards to managing the issue. I calculated the Cronbach’s alpha at 0.83, indicating high internal inconsistency for the scores (Carpita & Manisera, 2008; Downey & King, 1998). Though research indicated that an alpha of 0.81 is acceptable for the ProQOL-5 CFS (Stamm, 2010), this was a substantial flaw in the study with respect to the internal validity of the results, so interpretation and generalization of results need to be approached with extreme caution (Shadish et al., 2002).

Other limitations were related to chosen methodology. This study was a quantitative, correlational study of a cross-sectional nature, which was done to explore any potential relationships between variables, including the strength and direction of these relationships (Campbell & Stanley, 1963; Frankfort-Nachmias, et al., 2015). The primary limitation to utilizing this method was with respect to how unknown variables may add to the direction and strength of relationship between variables, therefore presenting a threat to the validity to the design (Frankfort-Nachmias et al., 2015).

Another limitation was with respect to the COVID-19 pandemic. This study began during the 2020 pandemic, at which time resources for nonprofit agencies were impacted and the ability for volunteers to volunteer was challenged due to shutdowns. Providing access to volunteers was difficult, particularly because many agencies

transitioned to virtual means/methods (Lachance, 2020). This factor may have played a role in the results as those who normally volunteer may have had unexpected changes to their volunteer experience or an inability to participate with their organization (Lachance, 2020). I did not collect any data related to these potential issues so I do not have any information about how respondents' answers may have been different if not going through the pandemic. In addition, there may have been potential participants who did not participate in my study due to stressors related to the pandemic that they were focusing on.

Purposive convenience sampling and snowball sampling methods also potentially impacted the validity due to potential selection bias (Frankfort-Nachmias et al., 2015; Shadish et al., 2002). Potential participants who have experienced ACEs may not want to think about those experiences and may have chosen not to participate, thus contributing to nonresponse error. Evaluation apprehension may have occurred for some participants, which may have been related to participants not completing all items in the survey which occurred often in this study. Out of 210 started surveys, 49 did not complete the survey (opting out of the study prior to completing the informed consent) while 76 were recorded as only partial responses (did not complete all items) which were unable to be utilized in the final data analyses. This indicates that nonresponse error was a threat to the validity of the study (Frankfort-Nachmias et al., 2015; Shadish et al., 2002).

Hypothesis guessing by participants was also a threat to the validity of the study as ethical guidelines require informed consent to include the purpose and nature of the study as well as examples and description of some of the questions that a participant will

encounter (Shadish et al., 2002). The *ProQOL 5 CFS* and *ACE-SF* both include sensitive questions so this may have influenced participation in the study and respondents may have answered questions in ways that were not completely forthcoming and honest (Frankfort-Nachmias et al., 2015). There is a threat of response bias in which the respondents may have denied or underreported trauma, which may have occurred in this study due to the nature of the wording of the questions on the *ACE-SF* (Frankfort-Nachmias et al., 2015).

While the research design and online data collection method were cost-effective and allowed for a sufficient sample size to respond at a faster rate, the study recruitment materials did not reach those who did not have access to technology to participate in the study. This may have impacted respondent rates and the representation of the population being studied (Frankfort-Nachmias, 2015). Because the sample may be skewed in relation to those that had access to computers, the Internet, and the sites where the study was posted, it is important to be cautious in the generalization of the results (Frankfort-Nachmias, 2015). Selection was another limitation to this study due to the use of convenience sampling and lack of representation for certain volunteers, such as those with limited access to technology (Frankfort-Nachmias, et al., 2015). For instance, those who are non-white, older, and of lower socioeconomic status are found to have less access to technology, thus limiting both the ability to have participated in the survey as well as allow for generalizability of the results to the larger population (Frankfort-Nachmias et al., 2015).

Human error by the researcher during interpretation of results and data collection are another potential threat to the validity of the study (Frankfort-Nachmias et al., 2015). While efforts were made to ensure inter-coder reliability to decrease discrepancies, errors did occur on the part of the researcher during survey development (Frankfort-Nachmias et al., 2015). Additionally, direct data entry was completed to code for data cleaning, coding for missing data, and statistical analysis to decrease the impact of human error on the findings of the study (Frankfort-Nachmias et al., 2015).

Because the sample for this study was 94.2% female (n=86) it is not possible to conclusively determine if the results of this study support or contradict previous findings. Additional studies should be completed with an overall larger sample, and a more equal distribution of males and females, to determine if the results of previous studies are upheld or contradicted. Also missing from this study was the inclusion of measuring of resilience. Resilience is an important part of the CF resilience theory and has been found to be related to one's ability to avoid CF even when experiencing trauma (Ludick & Figley, 2017; Radey & Figley, 2007; Turgoose & Maddox, 2017). Because this variable was not measured in this study, it is not possible to know if the level of resilience held by the participants in the sample would influence the relationship between the variables in this research question. It would also be important to control for measured resilience as well to determine if the differences in CF were statistically significant when controlling for both ACEs and resilience.

Recommendations

There are several recommendations that can be made for further study. Initially, a qualitative study was contemplated for the study but was not considered appropriate due to the nature of qualitative methodology as it was not the purpose of this researcher to study the experiences of these volunteers. There was no previous quantitative data found on the gap this researcher was attempting to explore so a quantitative method would fill a gap (Frankfort-Nachmias et al., 2015). However, the prospect of a future qualitative study may be helpful with respect to providing context around participant experiences of ACEs and CF (Frankfort-Nachmias et al., 2015). Understanding the specific nature of the ACEs experienced may inform why levels of CF differ or are related in specific ways.

In addition, a mixed method design in the future would allow both the quantitative and qualitative content to expand on quantitative data while providing qualitative context (Frankfort-Nachmias et al., 2015). Utilization of other measurement tools related to ACEs that have a higher degree of detail associated with the tool, may serve to further enhance the findings that this study has initiated (Kazeem, 2015). The most accurate implementation of the *ProQOL 5* is to conduct the assessment tool fully (Stamm, 2010), which is a further recommendation for research on ACEs and CF in the future. This would allow researchers to gain a more comprehensive understanding of the potential relationship between demographic factors, ACEs, and CF in volunteers (Kazeem, 2015; Merrick et al., 2018; Scherer et al., 2016; Stamm, 2010).

Some of the additional considerations for future research would be to expand the research to larger volunteer groups, including international cohorts, to gain a more

substantial representation of volunteers across demographics. It would also be important to include a measure of resilience in future studies. Resilience is an important part of the CF resilience theory and has been found to be related to one's ability to avoid CF even when experiencing trauma (Ludick & Figley, 2017; Radey & Figley, 2007; Turgoose & Maddox, 2017). Because this variable was not measured in this study, it is not possible to know if the level of resilience held by the participants in the sample would influence the relationship between the variables in this research question. It would also be important to control for measured resilience as well to determine if the differences in CF were statistically significant when controlling for both ACEs and resilience.

Implications

As discussed in Chapter 1, there are several potential implications for the results of this study. One potential implication is with respect to the development of training and support for those who volunteer in organizations to lessen the potential for CF in this population as it may lead to their exit from volunteering (Allen & Mueller, 2013; Quevillon, et al., 2016; Scherer et al., 2016). While my study did not show conclusive results in relation to which demographic groups may need additional intervention to prevent CF, it does give a starting point for demographic groups that should be studied further to see if there are needs that these groups have that may not be measured statistically. This could mean that mixed methods may be more appropriate to quantitatively measure the existence of ACEs, CF, and also resilience and then use a qualitative method to determine how volunteers believe these things impact their ability to continue to volunteer. This could allow organizations the ability to mitigate potential

issues for volunteers and the resulting larger negative impacts such as psychiatric distress, burnout, and turnover rates within the organization (Adams et al., 2006; Allen & Mueller, 2013; Chen & Yu, 2012; Diaconescu, 2015; Harr, 2013; Harrison & Westwood, 2009; Scherer et al., 2016). By further addressing volunteer needs, constituent care could be better managed through the continuation of the quality of services offered by the organization and ensuring the continuum of care (Allen & Mueller, 2013; Chen & Yu, 2012; Garner & Garner, 2011; Scherer et al., 2016).

Nonprofit organizations rely on volunteers, who are the backbone of such organizations and are an underappreciated resource whose impact on social change is not celebrated. Since it has been learned that turnover rates have been shown to be detrimental with respect to service quality in non-profits (Allen & Mueller, 2013; Garner & Garner, 2011; Nesbit et al., 2018), the findings of this study may serve to inform staffing and training for volunteers, improve continuity of care for volunteers, address possible causes of staff dissatisfaction, and to overall support volunteers through understanding that they may have traumatic issues in their past that could be related to their performance and longevity serving the organization (Allen & Mueller, 2013; Chen & Yu, 2012; Garner & Garner, 2011; Scherer et al., 2016; Setti et al., 2018; Wells, 2018).

Conclusion

Researchers in the field of volunteerism, CF, and ACEs have made gains with respect to understanding the dynamics of volunteerism and organizational management (Allen & Mueller, 2013; Chen & Yu, 2012; Butler et al., 2018; Garner & Garner, 2011; Howard et al., 2015; Keesler, 2018; Scherer et al., 2016) and fostering an understanding

CF in helping professions (Adams et al., 2006; Bride et al., 2007; Butler et al., 2018; Cohen & Collens, 2013; de Figueiredo, et al., 2014; Diaconescu, 2015; Harr, 2015; Harrison & Westwood, 2009; Hegney et al., 2014; Quevillon et al., 2016; Sinclair et al., 2017; Stamm, 2010). There has been considerable research to further explore the dynamics between volunteerism and CF since it has been identified as a contributing factor to volunteer demotivation to provide services and potentially leave the organization (Allen & Mueller, 2013; Chen & Yu, 2012; Scherer et al., 2016).

Researchers have gained a deeper understanding of ACEs as they are related to professional development (Anda et al., 2004; Butler et al., 2018; Felitti et al., 1998; Howard et al., 2015; Navalta et al., 2018; Strait & Bolman, 2017). This study served to examine the relationships between demographic factors (gender, age, ethnicity, years volunteering, education level), ACEs, and CF in volunteers. I also studied differences in CF by demographics and when controlling for ACEs. The researcher has substantiated that there is a statistically significant relationship between ACEs and CF across volunteers and that there are statistically significant relationships between some demographic factors, ACEs, and CF. Though the statistical relationship was noted as significant, there was no linear relationship which will require further exploration in future research. Additionally, the research questions explored volunteer demographics and CF, finding that there was a statistical relationship between ethnicity and CF, which warrants future research exploration. Lastly, further exploration of a larger volunteer cohorts would allow for a more substantial representation of volunteers across demographics. With appropriate measures and further exploration, gaining further insight

into how organizations may mitigate CF on volunteers based on their characteristics to enhance organizational management to support those that benefit from the organizations. Future research is warranted to bolster these findings and to enhance a deeper understanding of how nonprofits can effectively meet the needs of volunteers while improving for volunteer resilience through potential screening, training, and effective supervisory processes to decrease potential turnover and therefore allow nonprofits to maintain their functionality in serving others.

References

- Adams, R. E., Boscarino, J. A., & Figley, C. R. (2006). Compassion fatigue and psychological distress among social workers: A validation study. *American Journal of Orthopsychiatry*, *76*(1), 103–108. <https://doi.org/10.1037/0002-9432.76.1.103>
- Allen, J. A., & Mueller, S. L. (2013). The revolving door: A closer look at major factors in volunteers' intention to quit. *Journal of Community Psychology*, *41*(2), 139–155. <https://doi.org/10.1002/jcop.21519>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). <https://doi.org/10.1176/appi.books.9780890425596>
- Anda, R. F., Butchart, A., Felitti, V. J., & Brown, D. W. (2010). Building the framework for global surveillance of the public health implications of adverse childhood experiences. *American Journal of Preventative Medicine*, *39*(1), 93–98. <https://doi.org/10.1016/j.amepre.2010.03.015>
- Anda, R. F., Fleisher, V. I., Felitti, V. J., Edwards, V. J., Whitfield, C. L., Dube, S. R., & Williamson, D. F. (2004). Childhood abuse, household dysfunction and indicators of impaired worker performance in adulthood. *The Permanente Journal*, *8*(1), 30–38. <https://doi.org/10.7812/tpp/03-089>
- Baird, K., & Kracen, A. C. (2006). Vicarious traumatization and secondary traumatic stress: A research synthesis. *Counselling Psychology Quarterly*, *19*(2), 181–188. <https://doi.org/10.1080/09515070600811899>
- Baum, N., Rahav, G., & Sharon, M. (2014) Heightened susceptibility to secondary

- traumatization: A meta-analysis of gender differences. *American Journal of Orthopsychiatry*, 84(2), 111–122. <https://doi.org/10.1037/h0099383>
- Belsky, J., & Pluess, M. (2009). Beyond diathesis stress: Differential susceptibility to environmental influences. *Psychological Bulletin*, 135(6), 885–908. <https://doi.org/10.1037/a0017376>
- Benight, C. C. (2012). Understanding human adaptation to traumatic stress exposure: Beyond the medical model. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4(1), 1–8. <https://doi.org/10.1037/a0026245>
- Bouchard, L., & Rainbow, J. (2021). Compassion fatigue, presenteeism, adverse childhood experiences (ACES), and resiliency levels of doctor of nursing practice (DNP) students. *Nurse Education Today*, 100, 1–6. <https://doi.org/10.1016/j.nedt.2021.104852>
- Boscarino, J. A., Figley, C. R., & Adams, R. E. (2004). Compassion fatigue following the September 11 terrorist attacks: A study of secondary trauma among New York City social workers. *International Journal of Emergency Mental Health*, 6, 57–66. <https://doi.org/10.1177/1049731507310190>
- Bride, B. E., Radey, M., & Figley, C. R. (2007). Measuring compassion fatigue. *Clinical Social Work Journal*, 35(3), 155–163. <https://doi.org/10.1007/s10615-007-0091-7>
- Buchner, A., Faul, F., & Erdfelder, E. (n.d.) G*Power. Retrieved June 30, 2014, from <http://www.gpower.hhu.de/>
- Bureau of Labor Statistics U.S. Department of Labor. (2016). News release: Volunteering in the United States. Retrieved October 15, 2019, from

<https://www.bls.gov/news.release/volun.nr0.htm>

Butler, L. D., Maguin, E., & Carello, J. (2018). Retraumatization mediates the effect of adverse childhood experiences on clinical training-related secondary traumatic stress symptoms. *Journal of Trauma & Dissociation*, *19*(1), 25–38.

<https://doi.org/10.1080/15299732.2017.1304488>

Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Houghton Mifflin.

Carpita, M., & Manisera, M. (2008). On the imputation of missing data in surveys with Likert-type scales. *Journal of Classification*, *28*(1), 93–112.

<https://doi.org/10.1007/s00357-011-9074-z>

Chen, C., & Yu, T. (2012). Effects of positive vs negative forces on the burnout–commitment–turnover relationship. *Journal of Service Management*, *25*(3), 388–410. <http://dx.doi.org/10.1108/JOSM-01-2012-0003>

Ciucescu, N. (2009). The role and importance of non-profit organizations. *Studies and Scientific Researches – Economic Edition*, *14*, 14–35.

<https://doi.org/10.29358/sceco.v0i14.35>.

Cohen, K., & Collens, P. (2013). The impact of trauma work on trauma workers: A metasynthesis on vicarious trauma and vicarious posttraumatic growth. *Psychological Trauma: Theory, Research, Practice, and Policy*, *5*(6), 570–580.

<https://doi.org/10.1037/a0030388>

Creswell, J. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (Laureate Education, custom ed.). Sage Publications.

- de Figueiredo, S., Yetwin, A., Sherer, S., Radzik, M., & Iverson, E. (2014). A cross-disciplinary comparison of perceptions of compassion fatigue and satisfaction among service providers of highly traumatized children and adolescents. *Traumatology, 20*(4), 286-295. doi: <https://doi.org/10.1037/h0099833>
- Diaconescu, M. (2015). Burnout, secondary trauma, and compassion fatigue in social work. *Social Work Review/Revista De Asistentia Sociala, 14*(3), 57-63.
- Downey, R.G. & King, C.V. (1998). Missing data in likert ratings: A comparison of replacement methods. *The Journal of General Psychology, 125*(2), 175-191. doi: [10.1080/00221309809595542](https://doi.org/10.1080/00221309809595542)
- Esaki, N. & Larkin, H. (2013). Prevalence of adverse childhood experiences (ACEs) among child service providers. *Families in Society: The Journal of Contemporary Social Services, 94*(1), 31–37. doi: <https://doi.org/10.1606/1044-3894.4257>
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*, 1149-1160. doi:10.3758/BRM.41.4.1149
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. *American Journal of Preventative Medicine, 14*(4), 245-258. doi:10.1016/S0749-3797(98)00017-8.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. Thousand Oaks, CA: SAGE Publications

- Figley, C. R. (1995). Compassion fatigue as secondary traumatic stress disorder: An overview. In C. R. Figley (Ed.), *Compassion fatigue: Coping with secondary traumatic disorder in those who treat the traumatized* (pp. 1–20). New York: Brunner-Mazel.
- Frankfort-Nachmias, C., Nachmias, D., & DeWaard, J. (2015). *Research methods in the social sciences* (8th ed.). New York: Worth.
- Garner, J. T. & Garner, L. T. (2011). Volunteering and opinion: Organizational voice and volunteer retention in nonprofit organizations. *Nonprofit and Voluntary Sector Quarterly*, 40(5), 813-828. doi: <https://doi.org/10.1177/0899764010366181>
- Hardt, J. & Rutter, M. (2004). Validity of adult retrospective reports of adverse childhood experiences: Review of the evidence. *Journal of Child Psychology and Psychiatry*, 45(2), 260-273. <https://doi.org/10.1111/j.1469-7610.2004.00218.x>
- Harr, C. (2013). Promoting workplace health by diminishing the negative impact of compassion fatigue and increasing compassion satisfaction. *Social Work & Christianity*, 40(1), 71-88. doi:[10.4172/1522-4821.1000259](https://doi.org/10.4172/1522-4821.1000259)
- Harrison, R. L. & Westwood, M. J. (2009) Preventing vicarious traumatization of mental health therapists: Identifying protective practices. *Psychotherapy Theory, Research, Practice, & Training*, 46(2), 203-219. doi: 10.14288/1.0054403
- Hausknecht, J. P., Trevor, C. O., & Howard, M. J. (2009). Unit-level voluntary turnover rates and customer service quality: Implications of group cohesiveness, newcomer concentration, and size. *Journal of Applied Psychology*, 94(4), 1068-1075. <http://dx.doi.org/10.1037/a0015898>.

- Hegney, D. G., Craigie, M., Hemsworth, D., Osseiran-Moisson, R., Aoun, S., Francis, K., & Drury, V. (2014). Compassion satisfaction, compassion fatigue, anxiety, depression, and stress in registered nurses in Australia: Study 1 results. *Journal Of Nursing Management*, 22(4), 506-518. doi:10.1111/jonm.12160
- Hellerstein, J.M. (2008). Quantitative data cleaning for large databases. *United Nations Economic Commission for Europe*, 1-42.
- Hemsworth, D., Baregheh, A., Aoun, S., & Kazanjian, A. (2017). A critical inquiry into the psychometric properties of the professional quality of life scale (ProQol-5) instrument. *Applied Nursing Research*, 39, 81-88. doi: [10.1016/j.apnr.2017.09.006](https://doi.org/10.1016/j.apnr.2017.09.006)
- Howard, A. R. H., Parris, S., Hall, J. S., Call, C. D., Razuri, E. B., Purvis, K. B. & Cross, D. R. (2015). An examination of the relationships between professional quality of life, adverse childhood experiences, resilience, and work environment in a sample of human service providers. *Children and Youth Services Review*, 57, 141-148. doi: <https://doi.org/10.1016/j.childyouth.2015.08.003>
- Ilic, D., Nordin, R.B., Glasziou, P., Tilson, J.K., & Villanueva, E. (2014). Development and validation of the ACE tool: Assessing medical trainees' competency in evidence-based medicine. *BMC Medical Education*, 14 (114), 1-6. <https://doi.org/10.1186/1472-6920-14-114>
- Jan, S. & Shieh, G. (2019). Sample size calculations for model validation in linear regression analysis. *BMC Medical Research Methodology*, 19(54), 1-9. <https://doi.org/10.1186/s12874-019-0697-9>

- Kazeem, O.T. (2015). A validation of the Adverse Childhood Experiences Scale in Nigeria. *Research on Humanities and Social Sciences*, 5(11), 18-23.
- Keesler, J. M. (2018). Adverse childhood experiences among direct support professionals. *Intellectual and Developmental Disabilities*, 56(2), 119-132.
<https://doi.org/10.1352/1934-9556-56.2.119>
- Killian, K.D. (2008). Helping till it hurts? A multimethod study of compassion fatigue, burnout, and self-care in clinicians working with trauma survivors. *Traumatology*, 14(2), 32-44. doi: 10.1177/1534765608319083
- Lachance, E.L. (2020). COVID-19 and its impact on volunteering: Moving towards virtual volunteering. *Leisure Sciences*, 43:1-2, 104-110, doi: [10.1080/01490400.2020.1773990](https://doi.org/10.1080/01490400.2020.1773990)
- Ludick, M., & Figley, C. R. (2017). Toward a mechanism for secondary trauma induction and reduction: Reimagining a theory of secondary traumatic stress. *Traumatology*, 23(1), 112-123. doi:10.1037/trm0000096
- Mäkikangas, A., & Kinnunen, U. (2016). The person-oriented approach to burnout: A systematic review. *Burnout Research*, 3(1), 11-23. doi:
<https://doi.org/10.1016/j.burn.2015.12.002>
- McCambridge, R. (2017). High nonprofit frontline turnover rates require focus and collective chutzpah. *Nonprofit Quarterly*. Retrieved from
<https://nonprofitquarterly.org/2017/01/03/high-nonprofit-frontline-turnover-rates-require-focus-collective-chutzpah/>.
- Meinck, F., Cosma, A.P., Mikton, C. & Baban, A. (2017). Psychometric properties of the

Adverse Childhood Experiences Short Form (ACE-ASF) among Romanian high school students. *Child Abuse & Neglect*, 72, 326-337. doi:

<https://doi.org/10.1016/j.chiabu.2017.08.016>

Merrick, M.T., Ford, D.C., Ports, K.A., & Guinn, A.S. (2018). Prevalence of adverse childhood experiences from the 2011-2014 behavioral risk factor surveillance system in 23 states. *JAMA Pediatrics*, E1-E7.

doi:10.1001/jamapediatrics.2018.2537

Mertler, C. (2018). *Introduction to educational research* (2nd ed). Thousand Oaks: Sage Publications.

Murphy, A., Steele, M., Dube, S. R., Bate, J., Bonuck, K., Meissner, P., Goldman, H., & Steele, H. (2014). Adverse Childhood Experiences (Adverse childhood experiences) questionnaire and Adult Attachment Interview (AAI): Implications for parent child relationships. *Child Abuse & Neglect*, 38, 224-233.

doi: [10.1016/j.chiabu.2013.09.004](https://doi.org/10.1016/j.chiabu.2013.09.004)

Navalta, C. P., McGee, L., & Underwood, J. (2018). Adverse childhood experiences, brain development, and mental health: A call for neurocounseling. *Journal of Mental Health Counseling*, 40(3), 266-278. <https://doi.org/10.17744/mehc.40.3.07>

Nesbit, R., Christensen, R.K., & Brudney, J.L. (2018). The limits and possibilities of volunteering: A framework for explaining the scope of volunteer involvement in public and nonprofit organizations. *Public Administration Review*, 78(4), 502-513. doi: <https://doi.org/10.1111/puar.12894>

Ortlepp, K. & Friedman, M. (2002). Prevalence and correlates of secondary traumatic

- stress in workplace lay trauma counselors. *Journal of Traumatic Stress*, 15(3), 213-222. doi: <http://dx.doi.org/10.1023/A:1015203327767>
- Quevillon, R. P., Gray, B. L., Erickson, S. E., Gonzalez, E. D. & Jacobs, G. A. (2016). Helping the helpers: Assisting staff and volunteer workers before, during, and after disaster relief operations. *Journal of Clinical Psychology*, 72, 1348–1363. doi:10.1002/jclp.22336
- Putnam, K. T., Harris, W. W., & Putnam, F. W. (2013). Synergistic childhood adversities and complex adult psychopathology. *Journal of Traumatic Stress*, 26, 435-442. doi:10.1002/jts.21833
- Radey, M. & Figley, C.R. (2007). The social psychology of compassion. *Clinical Social Work Journal*, 35, 207-214. doi: <https://doi.org/10.1007/s10615-007-0087-3>
- Scherer, L. L., Allen, J. A., & Harp, E. R. (2016). Grin and bear it: An examination of volunteers' fit with their organization, burnout, and spirituality. *Burnout Research*, 3(1), 1-10. doi: <https://doi.org/10.1016/j.burn.2015.10.003>.
- Setti, I., Zito, M., Colombo, L., Cortese, C.G., Ghislieri, C., & Argentero, P. (2018). Well-being and affective commitment among ambulance volunteers: A mediational model of job burnout. *Journal of Social Service Research*, 44(2), 236-248. doi: <https://doi.org/10.1080/01488376.2018.1442898>
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston: Houghton-Mifflin.
- Simon, M. K. (2011). *Dissertation and scholarly research: Recipes for success* (2011

Ed.). Seattle, WA, Dissertation Success, LLC.

- Sinclair, S., Raffin-Bouchal, S., Venturato, L., Mijovic-Kondejewski, J., & Smith-MacDonald, L. (2017). Review: Compassion fatigue: A meta-narrative review of the healthcare literature. *International Journal of Nursing Studies*, 699-24. doi:10.1016/j.ijnurstu.2017.01.003
- Sodeke-Gregson, E. A., Holttum, S., & Billings, J. (2013). Compassion satisfaction, burnout, and secondary traumatic stress in UK therapists who work with adult trauma clients. *European Journal of Psychotraumatology*, 4, doi:10.3402/ejpt.v4i0.21869. <https://doi.org/10.3402/ejpt.v4i0.21869>
- Stamm, B.H. (2005). *The ProQOL manual: The professional quality of life scale: Compassion satisfaction, burnout & compassion fatigue/secondary trauma scales*. Idaho: Sidran Press.
- Stamm, B.H. (2009-2012). *Professional Quality of Life: Compassion Satisfaction and Fatigue Version 5 (ProQOL)*. Idaho: Sidran Press.
- Stamm, B. H. (2010). *The concise ProQOL manual. (2nd Ed.)*. Pocatello, ID: ProQOL.org.
- Strait, J. & Bolman, T. (2017). Consideration of personal adverse childhood experiences during implementation of trauma-informed care curriculum in graduate health programs. *The Permanente Journal*, 21(1), 50-56. doi:10.7812/TPP/16-061
- Teicher, M.H. & Samson, J.A. (2016). Annual research review: Enduring neurobiological effects of childhood abuse and neglect. *The Journal of Child Psychology and Psychiatry*, 57(3), 241-266. doi: <https://doi.org/10.1111/jcpp.12507>

- Topitzes, J., Pate, D.J., Berman, N.D., Medina-Kirchner, C. (2016). Adverse childhood experiences, health, and employment: A study of men seeking job services. *Child Abuse & Neglect*, 61, 23-34. doi: <https://doi.org/10.1016/j.chiabu.2016.09.012>
- Turgoose, D., & Maddox, L. (2017). Predictors of compassion fatigue in mental health professionals: A narrative review. *Traumatology*, 23(2), 172-185. doi:10.1037/trm0000116.
- Trochim, W. M. (2006) *The research methods knowledge base* (2nd Ed). Retrieved from <http://www.socialresearchmethods.net/kb/>
- Wells, M. (2018). Healthcare turnover rates in 2018. *DailyPay*. Retrieved from <https://business.dailypay.com/blog/employee-turnover-rates-in-the-healthcare-industry>
- Writer, H. (2009, January 5). *Mental health hotline numbers and referral resources*. HealthyPlace. Retrieved on 2019, June 26 from <https://www.healthyplace.com/other-info/resources/mental-health-hotline-numbers-and-referral-resources>
- Zeidner, M., Hadar, D., Matthews, G., & Roberts, R.D. (2013). Personal factors related to compassion fatigue in health professionals. *Anxiety, Stress, & Coping*, 26(6), 595-609. doi: <https://doi.org/10.1080/10615806.2013.777045>

Appendix A: Demographic Form

Gender	Male Female Prefer not to answer
Age	18-65
Ethnicity	Caucasian/White African American/Black Hispanic/Latino Native American/American Indian Asian/Pacific Islander Other Prefer not to answer
Length of time volunteering	Year started volunteering
Education level	No diploma High school diploma/GED Associate degree Bachelor's degree Master's degree Doctorate degree

Appendix B: Professional Quality of Life Compassion Fatigue Subscale

When you [help] people you have direct contact with their lives. As you may have found, your compassion for those you [help] can affect you in positive and negative ways.

Below are some questions about your experiences, both positive and negative, as a [helper]. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the last 30 days. (Stamm, 2010) Likert Scale: 1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

- 2. I am preoccupied with more than one person I [help].
- 5. I jump or am startled by unexpected sounds
- 7. I find it difficult to separate my personal life from my life as a helper
- 9. I think that I might have been affected by the traumatic stress of those I help
- 11. Because of my helping, I have felt "on edge" about various things.
- 13. I feel depressed because of the traumatic experiences of the people I [help].
- 14. I feel as though I am experiencing the trauma of someone I have [helped].
- 23. I avoid certain activities or situations because they remind me of frightening experiences of the people I [help].
- 25. As a result of my [helping], I have intrusive, frightening thoughts.
- 28. I can't recall important parts of my work with trauma victims.

Total: _____

Total Score

Total Score	Level of CF
22 or less	Low
Between 23 and 41	Average/Moderate
42 or more	High

Appendix C: Adverse Childhood Experiences Survey Short Form

This survey is a 10 question survey intended to measure any negative (adverse) childhood experiences that occurred prior the age of 18. They are “yes” or “no” questions.

Yes = 1 No = 0

While you were growing up, during your first 18 years of life:

1. Did a parent/guardian in the household often: Swear at you, insult you, put you down, or humiliate you? or Act in a way that made you afraid that you might be physically hurt?
2. Did a parent/guardian in the household often: Push, grab, slap, or throw something at you? or Ever hit you so hard that you had marks or were injured?
3. Did an adult or person at least 5 years older than you ever: Touch or fondle you or have you touch their body in a sexual way? or Try to or actually have oral, anal, or vaginal sex with you?
- 4.: Did you often feel that: No one in your family loved you or thought you were important or special? or Your family didn't look out for each other, feel close to each other, or support each other?
5. Did you often feel that: You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? or Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
6. Were your parents ever separated or divorced?
7. Was your mother or stepmother: Often pushed, grabbed, slapped, or had something thrown at her? or Sometimes or often kicked, bitten, hit with a fist, or hit with

something hard? or Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?
9. Was a household member depressed or mentally ill or did a household member attempt suicide?
10. Did a household member go to prison?

Appendix D: Electronic Version of Survey

Volunteerism, ACEs and Compassion Fatigue

Informed Consent

You are invited to participate in a research study regarding your experiences as a volunteer.

This study is specifically attempting to explore if there is a relationship between volunteering, experiencing compassion fatigue, and adverse (unhealthy) childhood experiences across both the United States and internationally.

I obtained your information through the listserv associated with volunteering, a bulletin board or the Walden Participant Pool.

This form is specifically known as “informed consent” which assists you in understanding what this study entails prior to your decision around participation.

This study is being conducted by a researcher named Sreela Stovall, a PhD candidate at Walden University.

Background Information:

The purpose of this study is to determine if there is a statistical relationship between volunteers, compassion fatigue scores and adverse childhood experiences scores.

Procedures:

If you are willing to participate in this study, these are the specific areas of participation:

1. Complete an online survey that will take approximately 5-10 minutes.
2. Complete the survey only once.

A sample of some of the questions include:

- Did a parent/guardian in the household often: Swear at you, insult you, put you down, or humiliate you? or Act in a way that made you afraid that you might be physically hurt?

- Did you often feel that: No one in your family loved you or thought you were important or special? or Your family didn't look out for each other, feel close to each other, or support each other?
- I am preoccupied with more than one person I [help].
- I find it difficult to separate my personal life from my life as a helper

Voluntary Nature of the Study:

This is a voluntary study and you will be allowed to exit the survey at any time. You can always attempt to participate again later if you choose to drop out at any time.

Risks and Benefits of being in this study:

Being in this study may cause a level of discomfort, as the nature of the questions related to adverse childhood experiences are intrusive and can be disturbing. The same is for the questions related to experiencing compassion fatigue.

Being in this study will not pose a risk to your safety or well-being but you may experience emotional or psychological discomfort around it. Should you find yourself experiencing any difficulties, you will be provided with information for services and resources that may assist you at the end of the survey or by reaching out to the researcher.

The results of this study are intended to enhance an understanding of volunteer experiences and any, if at all, relationship between adverse childhood experiences and compassion fatigue for organizational benefit.

Payment:

There is no financial reimbursement to participation in this study.

Privacy:

Any reports generated by this study will not disclose or share your identity or scores. You will not be asked to share your name or other identifying information such as your phone number or address.

Data will be kept for research purposes only and will be kept secure by the researcher only and the dissertation

*** 1 Obtaining your Consent**

- I agree to participate
- I DO NOT agree to participate

Volunteerism, ACEs and Compassion Fatigue

Demographics

This page is specific to demographic information.

2. Are you male or female?

3. What is your age?

- 18 to 24
- 25 to 34
- 35 to 44
- 45 to 54
- 55 to 65

4. What is your ethnicity?

- White or Caucasian
- Black or African American
- Asian or Asian American
- Hispanic or Latino
- American Indian or Alaska Native
- Native Hawaiian or other Pacific Islander
- Prefer not to Answer

5 How long have you been volunteering (indicate year if you cannot recall)?

6. What is the highest level of education you have completed?

Volunteerism, ACEs and Compassion Fatigue

Compassion fatigue scale

When you [help] people you have direct contact with their lives. As you may have found, your compassion for those you [help] can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a [helper]. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the last 30 days. (Stamm, 2010).

7 Compassion Fatigue Scale

	Never	Rarely	Sometimes	Often	Very Often
I am preoccupied with more than one person I [help].	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I jump or am startled by unexpected sounds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find it difficult to separate my personal life from my life as a helper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think that I might have been affected by the traumatic stress of those I help	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because of my helping, I have felt "on edge" about various things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel depressed because of the traumatic experiences of the people I [help].	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel as though I am experiencing the trauma of someone I have [helped].	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I avoid certain activities or situations because they remind me of frightening experiences of the people I [help].	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a result of my [helping], I have intrusive, frightening thoughts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can't recall important parts of my work with trauma victims.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Volunteerism, ACEs and Compassion Fatigue

Adverse Childhood Experiences

This survey is a 10 question survey intended to measure any negative (adverse) childhood experiences that occurred prior the age of 18. They are “yes” or “no” questions.

* 8. Adverse Childhood Experiences Short Form:

While you were growing up, during your first 18 years of life:

	No	Yes
Did a parent/guardian in the household often: Swear at you, insult you, put you down, or humiliate you? or Act in a way that made you afraid that you might be physically hurt?	<input type="radio"/>	<input type="radio"/>
Did a parent/guardian in the household often: Push, grab, slap, or throw something at you? or Ever hit you so hard that you had marks or were injured?	<input type="radio"/>	<input type="radio"/>
Did an adult or person at least 5 years older than you ever: Touch or fondle you or have you touch their body in a sexual way? or Try to or actually have oral, anal, or vaginal sex with you?	<input type="radio"/>	<input type="radio"/>
Did you often feel that: No one in your family loved you or thought you were important or special? or Your family didn't look out for each other, feel close to each other, or support each other?	<input type="radio"/>	<input type="radio"/>

	No	Yes
Did you often feel that: You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? or Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?	<input type="radio"/>	<input type="radio"/>
Were your parents ever separated or divorced?	<input type="radio"/>	<input type="radio"/>
Was your mother or stepmother: Often pushed, grabbed, slapped, or had something thrown at her? or Sometimes or often kicked, bitten, hit with a fist, or hit with something hard? or Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?	<input type="radio"/>	<input type="radio"/>
Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?	<input type="radio"/>	<input type="radio"/>
Did a household member go to prison?	<input type="radio"/>	<input type="radio"/>

Thank you for completing this survey. If you are struggling after providing responses to this survey, please do not hesitate to reach out to me at sreela.stovall@waldenu.edu. If you are struggling, please find the below list of resources to assist you with anything you need.

Thank you

Thank you for completing this survey. If you are struggling after providing responses to this survey, please do not hesitate to reach out to me at sreela.stovall@waldenu.edu. If you are struggling, please find the below list of resources to assist you with anything you need.

- Suicide Prevention Lifeline -- 1-800-273-TALK
- Crisis Text Line -- Text HOME to 741741
- IMALive -- online crisis chat (www.imalive.org)
- National Alliance on Mental Illness (NAMI) - 1-800-950-NAMI (6264), www.nami.org
- National Institute of Mental Health NIMH - 1-866-615-6464, www.nimh.nih.gov

Appendix E: Mental Health Crisis Lines / Suicide Hotlines

- **Suicide Prevention Lifeline** -- 1-800-273-TALK
- **Crisis Text Line** -- Text HOME to 741741
- **IMAlive** -- online crisis chat (www.imalive.org)
- **National Alliance on Mental Illness (NAMI)** - 1-800-950-NAMI (6264), www.nami.org/Find-Support/NAMI-HelpLine
- **National Institute of Mental Health NIMH** - 1-866-615-6464, <https://www.nimh.nih.gov/health/find-help/index.shtml>