2020

The Link Between Animal Cruelty and Violent Crime Victimization: An Assessment of the Lifetime Impact of Animal Cruelty on Secondary Victims

Amber Ahern

The Link Between Animal Cruelty and Violent Crime Victimization: An Assessment of the Lifetime Impact of Animal Cruelty on Secondary Victims

by
Amber Ahern MS, LMHC

An Applied Dissertation Submitted to the
Abraham S. Fischler College of Education
and School of Criminal Justice in Partial
Fulfillment of the Requirements for the
Degree of Doctor of Philosophy

Nova Southeastern University
2020

Approval Page

This applied dissertation was submitted by Amber Ahern under the direction of the persons listed below. It was submitted to the Abraham S. Fischler College of Education and School of Criminal Justice and approved in partial fulfillment of the requirements for the degree of Philosophy at Nova Southeastern University.

Approved: _____ 9/25/20
Jared Bucker, Ph.D. Date:
Committee Chair

Approved: _____ 9/25/20
Grace Telesco, Ph.D. Date:
Committee Member

Approved: _____ 9/25/20
Tina Jaeckle, Ph.D. Date:
Committee Member

Approved: _____ 9/25/20
Marcelo Castro, Ph.D. Date:
Associate Dean

Statement of Original Work

I declare the following:

I have read the Code of Student Conduct and Academic Responsibility as described in the *Student Handbook* of Nova Southeastern University. This applied dissertation represents my original work, except where I have acknowledged the ideas, words, or material of other authors.

Where another author's ideas have been presented in this applied dissertation, I have acknowledged the author's ideas by citing them in the required style.

Where another author's words have been presented in this applied dissertation, I have acknowledged the author's words by using appropriate quotation devices and citations in the required style.

I have obtained permission from the author or publisher—in accordance with the required guidelines—to include any copyrighted material (e.g., tables, figures, survey instruments, large portions of text) in this applied dissertation manuscript.

_____*Amber Ahern MS, LMHC*_____
Name >*above the line, type your name*<

_____September 25th, 2020_____
Date >*above the line, type the date signed, e.g.,* March 31, 2019<

Abstract

The Link Between Animal Cruelty and Violent Crime Victimization: An Assessment of the Lifetime Impact of Animal Cruelty on Secondary Victims. Amber Ahern, 2020: Applied Dissertation, Nova Southeastern University, Abraham S. Fischler College of Education and School of Criminal Justice. Keywords: animal cruelty, secondary victimization of humans caused by animal cruelty, psychology, animal abuse, secondary victimization

Animal cruelty and the secondary victimization of humans caused by animal cruelty are significant social problems. The dissertation presented a comparative research study on the developmental, psychological, and emotional symptomatology experienced by crime victims who had prior experiences with animal cruelty as a secondary victimization versus those who had not. Secondary victimization, as well as animal cruelty experiences, were operationally defined. This dissertation presented a broad literature review focusing on animal cruelty, its overall impact, and the link to other forms of criminality. This dissertation reviewed the importance of this line of research and possible implications for policy, future research, the community, public safety, the criminal justice system, and for animal welfare. The anticipated methodology of this study was outlined.

Table of Contents

Appendices

Tables

Figure

Chapter 1: Introduction

Statement of the Problem

Animal cruelty. Animal cruelty refers to various forms of mistreatment against an array of animal types. Under most definitions, animal cruelty can be anything from failure to give necessary and essential care to the animal, to the pernicious torturing and killing of an animal. People have intense adverse reactions to animal cruelty cases portrayed in the media, which shows that the general public cares about how animals are treated; cruelty toward animals is a social problem warranting attention and one that should be dealt with legally when required (Vollum, Buffington-Vollum, & Longmire, 2004). Unfortunately, the current U.S. crime-reporting systems do not monitor animal cruelty (Merck, 2012).

According to research, a national crime-reporting system would be a challenge, as animal abuse laws are not uniform throughout the country, standardized reporting structures have not been developed, and many state and local law enforcement agencies exist (Lockwood, 2008, p. 92). Most studies on animal cruelty prevalence rely on reported media stories only. Even the animal abuse registry database administration system, a private system that launched in 2002 and uses media reports to build its data collection, only includes only those cases with a media reference or that proceeded to court (Dadds et al, 2004).

Researchers on animal cruelty have collected much of their information from speaking to the community, including those who admit to committing acts of cruelty and those who have witnessed it (Ascione & Shapiro, 2009). Lockwood (2008) conducted a survey and discovered that 14% of the populace had observed a person or persons

"intentionally or carelessly inflicting pain or suffering on an animal" (Lockwood, 2008, p. 101) in the past year. "This translates to over 15 million incidents of animal cruelty in a single year. Over half of the respondents stated that he or she had reported the incident to a law enforcement or humane organization" (Lockwood, 2008, p. 101).

Pain and suffering endured by the animal is the most discernible harm caused by animal cruelty. In contrast to many media reports, positive outcomes in most instances of physical animal cruelty are the exception. In reality, the abuse is often horrific and most of the time, the animals cannot be nursed back to good health and it is often not possible for adoption at a later stage (Arluke, 2006). Particularly when animals are hoarded, the crowding and resultant lack of socialization lead to difficulties with regard to health and behavior that may make it impossible for the animals to be adopted, leading to them having to be euthanized (Berry, Patronek, & Lockwood, 2005). The Humane Society (2014) reported that in a study on animal cruelty conducted in 2003, it was found that 62 percent of the animal victims were killed by the offender or had to be euthanized because of their injuries.

Animal victims. Most of the time, dogs (64.5%) and cats (18%) are victims of neglect and physical cruelty. Birds, hamsters, gerbils, rabbits, and reptiles are intermittently abused and make up 25% all other animals that are abused (Arluke & Luke, 1997; The Humane Society, 2014). An analysis of veterinarians' experiences with animal cruelty indicated that suspected perpetrators are more likely to abuse younger animals, with ages between seven months and two years, as they may be regarded as too lively and can be hard to teach (The Humane Society, 2014). Patronek (1999) found that,

simply for the "thrill" (p. 81), wild animals (i.e., rodent, deer, and foxes) are brutally attacked by poachers who intentionally injure the animals.

Animal abuse offenders. Researchers have noted that many neglected animals are frequently discovered in situations where owners have challenges with addictions and have difficulty meeting their own basic needs (Carlisle-Frank & Flanagan, 2006). According to several studies, most offenders are older adolescents or young adult males. Researchers have found that males are more likely to intentionally abuse animals than females (Carlisle-Frank & Flanagan, 2006; Flynn, 2001; Gerbasi, 2004; The Humane Society, 2014; Munro, 2005; Pierpoint & Maher, 2010).

Animal abuse seems concentrated in lower socioeconomic households, like most crime, though it is seen within all social classes (Flynn, 2001; Munro, 2005). Often, cruelty by physical abuse is triggered by misbehavior of the animal pet, leading to the animal abusers to cause pain and distress as a means of punishment and control (Carlisle-Frank & Flanagan, 2006). In other cases, the abuser may abuse the animal as an expression of anger (Patronek, 2008). In domestically abusive relationships within families and couples, offenders may use the abuse of a pet to establish control or to intimidate their human victims (Carlisle-Frank & Flanagan, 2006).

The human impact of animal cruelty. Further to the suffering to the animal victim, animal cruelty has an impact on the surrounding human counterparts in various ways. For example, serious hoarding cases can give rise to serious public health concerns. For example, homes of hoarders are often very dirty, with an accrual of animal feces that can result in ammonia gas and toxic air. Many homes are eventually condemned, which is

not only physically damaging to human family members living with animal hoarders but is also expensive and dangerous to society (Nathanson, 2009).

Human victims. Research on humans in relation to animal abuse most often focuses on the perpetrators of animal cruelty. This researcher studied how the witnesses of animal cruelty are emotional and psychologically impacted. Sometimes, women who are in abusive situations at home may not leave their abusive partners, partially due to concern regarding pets that would have to be left behind (Ascione, 1997). Additionally, these women may have few other options due to the social isolation and the financial constraints that often accompany domestic violence. Therefore, there may not be friends or family members to leave pets with, and kennels may be too expensive.

Response to the problem. Animal cruelty cases often traverse a number of local and state jurisdictions, in which each agency handles the cases differently. Each state specifies which actions against animal are prohibited and which types of animals are offered protection under the law. Some jurisdictions work within animal welfare organizations (e.g., humane societies, societies for the prevention of cruelty to animals, and animal control) that have staff specifically trained to work with animal cruelty cases (Arluke, 2004). Other places do not have local animal welfare organizations, giving the police sole responsibility for enforcing all animal-protection laws (Lockwood, 2006). In places where local organizations exist, the police often direct grievances regarding animal cruelty to these organizations, despite the fact that they are often under-resourced (in terms of funding and manpower) to deal with the cases (Schlueter, 2008).

Definition of Terms

To illustrate the impact of animal cruelty on secondary victims, this researcher examined the developmental, psychological, and emotional symptomatology of victims of violent crime and determine whether victims who had also experienced animal cruelty have higher levels of psychological and emotional trauma compared with victims who do not have this history.

Animal cruelty. Many definitions of animal abuse and cruelty exist. Each state's statute on animal cruelty varies in how it defines animal abuse or cruelty in terms of legality and for the purposes of prosecution. Previously, animal abuse was defined as "socially unacceptable behavior that intentionally causes unnecessary pain, suffering, or distress to and/or death of an animal" (Ascione, 1993, p. 228). For this research, a more comprehensive definition of animal cruelty *experiences* was defined to illustrate the characteristics of cruelty examined and analyzed through the methodology used.

Acts of animal cruelty may be unintentional or intentional, resulting from acts of omission (failure to provide for) or from acts of commission (intentional acts of harm). Acts of omission, as seen with neglect comprise the majority of animal cruelty cases (Carlisle-Frank & Flanagan, 2006). Cruelty by commission includes many forms and levels of harm, such as emotional abuse (habitual shouting, purposefully withholding of necessities, purposefully inducing fear or aggression), physical violence (hitting, kicking, striking, throwing objects, and torture), animal fighting, and sexual abuse (bestiality or zoophilia).

To measure the animal cruelty experiences of human secondary victims, this researcher determined whether animal cruelty was used as a weapon to psychologically,

emotionally, or mentally abuse or control the research participant or family members. Animal cruelty acts was further explored through assessing participants' overall experiences with animals and the subjective interpretations of traumatic events involving animals. This study objectively assessed whether participants who reported experiences with animal cruelty had significant victimization patterns consistent with other participants who reported individually interpreted encounters with animal cruelty. For this study, animal cruelty forms (e.g., overworking farm animals, dog fighting or cockfighting, capturing and harming protected animal species, over-hunting or hunting out of season, smuggling of exotic animal species, puppy mills, and other similar problems) were excluded from the working definitions of animal abuse.

Secondary victimization. Secondary victimization is defined as a person who is present at the scene of a violent crime and who is injured physically, mentally, or emotionally, resulting directly from witnessing that crime (Block & Block, 1984). Secondary victims are victims who are in some way observers of and impacted by immediate traumatic effects on primary victims. For example, a parent of a child who was sexually molested may be emotionally affected by the victimization of his or her child, the grieving family of a homicide victims, or the child of a battered woman who has witnessed the crime. Likewise, this researcher examined human secondary victims of animal cruelty (a child who witnessed the beating of his or her pet by a parent or a woman whose pet was abused by her significant other as a means of punishment her or reinforce his power and control over her). This term included pet owners or simply those participants who had lived or were living in or around an animal abuse scenario one or more times.

Background and Significance of the Research

To combat the problem of animal cruelty, researchers have asked questions regarding the relationship between animal cruelty and other forms of antisocial behavior (Arluke, Levin, Luke, & Ascione, 1999) inferences about those who have abused animals (Hensley & Tallichet, 2005). The current researcher posed questions regarding the effects that animal cruelty had on humans to put importance further on greater animal protection and policy reform and to add to the scientific knowledge of complex human and animal relationship. Thus, the researcher explored how those men and women who had also been secondary victims of animal cruelty healed from their traumas in comparison to those who had experiences with animal cruelty as a secondary victimization. This researcher highlighted the importance of developing standardized data-reporting protocols for animal abuse, early intervention, and of building a partnership among organizations aimed at violence prevention.

The researcher offered prevention strategies and treatment methods for the problem. These strategies included prevention through legislative and policy changes, prevention education (parenting classes, community awareness trainings, community and school safety outlets), and specific animal-assisted therapy treatment techniques. This study has significance on an academic level for its teachability and assistance in future research. Additional questions that this research posed were the following:

1. Why are certain child abuse victims more like to act violently against animals, while others do not?

2. Why do some secondary victims more like to offend while others are more likely to enter more abusive relationships?

3. How does gender influence this outcome?

4. How and what are the cultural variations of perceived child abuse and perceived animal abuse and how do they affect a child's ability to recover and adapt versus portray criminal behavior?

Future researchers can study how other childhood trauma, aside from caretaker maltreatment, influences later tendencies for criminality against animals and humans (natural disaster, loss of a parent, etc). Further research on how animal-assisted interventions may be an effective rehabilitation treatment for adult offenders may also be useful. This researcher proposed that further research on this topic would provide mental health professionals and social scientists with a better ability to create effective intervention for both the treatment of childhood animal cruelty and the prevention of adult violence. Implications for policy reform may be found in the conclusions of further studies on this topic. This research has implications for how physicians can psychologically treat the effects of animal cruelty on secondary victimization, thereby breaking cycles of abuse and further victimizations that may follow.

A variety of stakeholders may have interest in the results and implications of this study. In addition to the criminal justice system and those responsible for creating and strengthening law and policy around animal rights, mental health professionals can use the findings of this study when considering treatment planning for clients who have been secondary victims of animal cruelty. Other stakeholders include humane educators, domestic violence shelters, law enforcement, child and adult protective services, animal safety enforcement, veterinarians, and the media.

Research Questions and Hypotheses

The researcher hypothesized that there was a significant difference in the type, severity, or frequency of psychological symptoms when comparing those who have experienced animal cruelty to those who have not. The researcher hypothesized that there would be a pattern of psychological symptoms that characterize the experiences of secondary victims. The researcher asked the following qualitative questions:

1. What are the lived experiences of animal cruelty as a secondary victimization in the general crime victim population?

2. Is there a prevalence of victims who have experienced (during adulthood or childhood) animal cruelty as a secondary victimization?

Barriers and Issues

Confounding variables. The researcher assessed the impact of the following confounding variables on outcomes: the specific scenario, emotional attachment to the primary victim (the animal), intelligence level, psychological issues, level of current trauma, culture, upbringing, and more. The presence of domestic violence in the household were included as a confounding variable. The researcher compared homes with domestic violence only with those with both domestic violence and animal cruelty. Research that indicated that most children who have witnessed animal abuse in the home were also witnessing other forms of violence or being abused themselves could offer an alternative explanation for the later and more intense trauma symptoms shown by the participants in this study. Therefore, a third group of victims of nonanimal cruelty related childhood abuse (e.g., witnessing domestic violence) was compared to the other study

groups, including the group members who reported animal cruelty alone and those who reported animal abuse along with other domestic violence.

Chapter 2: Review of the Literature

This literature review shows that little research regarding these particular proposed research questions exist. Researchers have studied the relationship between animal cruelty and domestic family violence, along with conducting extensive research on ways that witnessing animal cruelty can lead to the perpetration of animal cruelty. However, there are few, if any, research studies surveying the other psychological and emotional effects of animal cruelty on humans. Most researchers have focused on the perpetrators as opposed to the human victims of animal cruelty; however, these individuals are rarely accounted for in the researcher. This researcher presented a new approach for determining the impact of animal cruelty and to add to the literature of animal abuse prevention and education, thereby increasing public awareness of the issue.

Significance of Animal Abuse Research

According to literature, animal abuse research should be further developed by criminologists to illustrate how animal abuse may be (a) an indicator of real or potential inter-human conflict, (b) an important component of criminal law, (c) pain and suffering that should be prevented and avoided for moral reasons, (d) a violation of rights for both animals and humans, and (e) one of a number of oppressions recognized by feminism as interrelated (Beirne, 2009). As shown in this research, animal cruelty was a vital study for criminologists as its manifestation may be an indication of situations of interhuman violence.

This research should encourage social agencies to engage in active cross-reporting and information sharing on cases possibly linked with other crime. This information may create programs of rehabilitation geared toward the specific needs of animal cruelty

offenders. It would be ideal if offenders receive evaluations that determine their risks to public safety. Cross-reporting between agencies can improve human welfare, animal welfare and public safety. Unfortunately, how society charges and successfully prosecutes animal cruelty offenses at the criminal level is not always commensurate with the level of cruelty committed. This situation must be improved, and research is essential for the task.

Animal maltreatment encompasses a wide range of behaviors, from insufficient knowledge and awareness of animal care (resulting in neglect and abuse) to patterned, premeditated and vicious acts of violence toward animals. Data has shown that the general public is interested in and finds research on animal abuse important. The Humane Research Council (HRC) reports that the animal protection movement was rated "favorably" by 68% of respondents in HRC's Wave 6 Animal Tracker annual survey.

Public safety. Law enforcement and first responders should be informed about the risk factors and impact of animal cruelty. If they can better learn to spot these abusive dynamics in a home and are aware of the implications for risk, they may better enforce appropriate laws (Beck & Katcher, 2003). Animal cruelty offenders should receive individualized risk assessments by educated evaluators, who are well-versed in the most current research, and receive sentences requiring appropriate intervention to address public safety issues (Ascione & Shapiro, 2009).

The community. Communities should be knowledgeable of the relationship among violent crime, animal abuse, and its influence on individuals and families. School staff educated in animal cruelty issues, such as influences on secondary victims, can build empathy in high-risk youth; moreover, staff can stay vigilant for early signs of animal

cruelty and domestic abuse in families. Humane education programming with children may increase empathy toward both animals and people (Thompson & Gullone, 2003).

Policy. Past researchers discuss suggestions for policy reform, including the reclassification of animal abuse from a crime against property to a crime against society. "This classification would allow animal abuse to be taken more seriously in the context of criminal justice … they position human and animal abuse on the same or similar playing field" (Ascione & Shapiro, 2009, p. 16). Other policy changes that may be supported by the findings of this research include; incorporating animals on domestic violence protective orders, civil court consequences of animal abuse, loss, and damage, the opening women's shelters to pets, and including animal abuse as a separate category in national data collections systems. This process would help to alert law enforcement to the worth of animal abuse as a gauge of other violent or delinquent behavior (Ascione & Shapiro, 2009, p. 17). Further researchers can create updated education materials to educate mental health professionals, physicians, schoolteachers, law enforcement, and other community agencies on the signs and symptoms of childhood mistreatment at home, in the same way that they are trained to consider bed-wetting or other forms of negative behavioral changes.

This study has implications for legislative and policy changes for, not only animal abuse, but for child abuse, through stricter laws and enforcement of current laws and more serious punishments or alternative sentencing for abusers. This study will also have implications for how we may choose to sentence and treat juvenile offenders who are victims of child abuse, as to prevent further criminality.

Clinical treatment. Further research on this topic could assist clinicians who work with both animal offenders and secondary victims of animal cruelty on making appropriate treatment plans and assessments. Determining the underlying reasons and motivations for the acts of animal cruelty by a specific individual is critical in order to respond effectively to animal cruelty from a past, present, and future perspective. Individualized assessment of animal cruelty offenders is necessary to ensure appropriate and effective interventions and enhance both animal and human welfare. This researcher aimed to help mental health clinicians effectively treat patients who might have suffered from animal abuse as a secondary victimization in the past.

Animal welfare. Animals are cognizant beings and violence toward them can cause great anxiety, fear, pain and suffering similar to the experiences of human victims of violence (Dawkins, 2008). This research hopes to aid in current efforts to have animals protected under restraining orders and universally allowed in domestic violence shelters. These changes may create shifts in the decisions of those secondary victims who may have chosen to stay in abusive situation to protect their animals.

Predictor Factors of Animal Abuse

When reviewing the literature on animal abuse, the researcher noted that animal cruelty is often explored regarding its predictive validity of other forms of antisocial behavior. Cruelty toward animals is more often being viewed as a warning sign for future violence (Ascione, 1993; Merz-Perez & Heide, 2003). However, there is limited research on how researchers and school staff can actually predict the occurrence of animal abuse.

Signs in children. Some researchers have discussed animal cruelty seen in children and adults with certain mental health issues or personality disorders. Children

who display symptomatology consistent with a diagnosis for conduct disorder or oppositional defiant disorder have been known to partake in acts of animal cruelty (Merz-Perez & Heide, 2003). However, even research on these topics focus on animal abuse as an indicator of another disorder. This present study discusses animal cruelty as a crime and a separate criminal act regardless of reason and dependent upon a situational framework. As this section shows, animal cruelty may have a correlational relationship with other crime, though may not necessarily be a predictor or symptom of other criminal behavior. Understanding correlational patterns of animal cruelty and other crime committed along with it, may be the most effect way of adding to knowledge used for education, prevention, and intervention.

Culture and cruelty. Culture and context play a large role in the difficulty of analyzing and defining animal abuse across the board. Researchers emphasize the value of establishing motives for animal cruelty and in "establishing any applicable patterns of abuse as a remedy to the contradictory elements that cultural parameters impart to the study of cruelty to animals" (Merz-Perez & Heide, 2003, p. 16). Not only do members of various cultures have different views on what animal cruelty entails, but they also have different views on animals as pets in general. For example, some Americans may view leaving a dog to live outside as an act of animal cruelty; people in other countries may believe that dogs are meant to live outside or work as guard dogs for the home. The researcher of this study considered cultural and contextual factors of study participants' experiences with animal cruelty when analyzing the data.

Context That Animal Cruelty Occurs

Animal cruelty is seen in various facets of human life. The researcher of the current study suggested that humans were affected emotionally and psychologically by acts of animal cruelty. This section explores the prevalence of animal cruelty as seen in intimate relationships and other domestic situations and in the lives of children. Current literature is scarce because limited research have been done regarding this subject.

Intimate relationships. A particular study reported that women in domestic violence shelters are 11 times more likely to report animal cruelty by their partner than women who do not experience intimate violence. This same study found that 60% of those who saw animal cruelty were also exposed to other forms of domestic violence (Ascione et al., 2007). Too often, the cruelty or threat of abuse of an animal is a way to control or punish the victims of violent offenders. "Information from veterinarians, animal control officers, animal shelters, women's shelters, and law enforcement" (Beirne, 2004, p. 45) have confirmed that animal abuse by children and adults occur along with other forms of family violence. This finding has shown that adult criminals' motivations for animal abuse and interhuman violence (i.e., form of control), but also on the causes of children's aggressive behavior toward animals (i.e., learned behaviors). The finding has shown that although child abuse may correlate with adult violence and animal cruelty, animal cruelty alone is not a strong predictor of adult violence (Beirne, 2009). In a research study, 92% of the respondents who reported animal cruelty in addition to other forms of domestic violence against them reported that they were not going to speak to the animal's veterinarian about the situation. Many animals die due to the abuse and failure to report (DeGue & DiLillo, 2008).

Harm and threats of harm. A 2009 study showed that 100% of respondents in an intimate partner violence study indicated that their companion animals had been verbally or physically assaulted by their partners (DeGue & DiLillo, 2008). Likewise, Currie (2006) found that in homes where domestic violence is present, between 25% to 75% of the animals have either been abused or threatened with abuse. In interviews with women with companion animals from six different domestic violence programs; 48.8% of the victims reported that the batterers made threats to harm pets, 46.3% reported that the pets were harmed or killed, and 26.8% of these women reported that their pets affected their decisions to enter the shelter (Flynn, 2000c). In a study by Ascione et al. (2007), abused women who reported at a shelter were questioned at the point of intake regarding their pets—if they were abused and the role of the pets in the relationship. More than 46% of the women told the researcher that their abuser either threatened to harm their pets or did harm the pets.

Prolonging the leaving process. Abused women sometimes live in vehicles with their pets for some time until a pet-friendly shelter opens. In many cities, these shelters do not exist (Faver & Strand, 2003a). In a particular study, it was found that eighteen percent of abused women said that trepidation about their pets' well being delayed them from leaving and looking for shelter (Renzetti, 1992). Many women reported that they returned to the abusive environment, and they were abused emotionally and physically for longer periods; when they were gone, their pets remained with the abusive partner (Flynn, 2000a, p. 162). In 33% of the cases where animals had died in domestic violence situations, the respondents reported that the violent partner told them that if they left, their pet would be harmed or killed (DeGue & DiLillo, 2008).

Researchers surveying the country found that staff of few shelters ask systematic questions regarding pets and animal abuse during the intake interview (Ascione, Weber, & Wood, 1997, p. 205). Despite this finding, there are strong justifications for this line of questioning at domestic violence programs, child and animal welfare organizations, programs to help the children of women abused by their partners, and to inform laws regarding animal cruelty.

Child secondary victims. In 88% of investigations for physical child abuse in families, there were also reports of animal abuse in the home and the children said that abusive adults punished or threatened them by killing, hurting or removal of their pets (Robin, ten Bensel, Quigley, & Anderson, 1984). Studies have shown that 82% of homes inspected by the RSPCA were known to local social services agencies (Faver & Strand, 2003b; Flynn, 2000b). Likewise, 62% were known to probation agencies (Hutton, 1983). Another study reported that 60% of families with abused children also had pets that were being abused, and in two-thirds of these cases where children were found to be partaking in companion animal cruelty, the fathers were also abusing those same pets (Widom, 2000). In a third of these homes, the children were cruel to the animals and used them as scapegoats for anger.

Children subjected to domestic violence were at almost a three times greater risk to be cruel to animals than those who did not have a history of being exposed to domestic violence (Kogan, McConnell, Schoenfeld-Tacher, & Jansen-Lock, 2004). Thirty-two percent of sheltered women noted that at least one of their children had killed or harmed a pet or other animal after witnessing domestic violence and animal abuse (Renzetti, 1992). In the past, researchers have only labeled the child perpetrators of animal cruelty as

mentally ill. In understanding the link of negative home conditions, researchers and practitioners can intervene early enough to protect the child victims and the animal victims by working on primary (i.e., community education) and secondary prevention (i.e., therapy for at-risk or offending youth) strategies (Dane & Schneider, 1998).

The Human and Animal Bond

In a study of pet owners in the United States, over 97% of people agreed with the idea that the family pet was an equal member of the family (Risley-Curtiss et al., 2006). Risley-Curtiss et al. (2006) explored the extent to which a family member would go to protect his or her pets. Most of those surveyed reported that they would take extreme measures to protect their pets from danger and would even sacrifice their own safety to ensure the safety of their pet (Risley-Curtiss et al., 2006). These conclusions may be evidence for how animals can be used as scapegoats for abuse within families and used against a victim by a perpetrator and the extent to which animal cruelty against a domestic pet can psychologically and emotionally impact a secondary victim. In fact, social services often use evidence of animal abuse as a first alert indicating the need for intervention for families struggling with interpersonal violence (Tiplady, Walsh, & Phillips, 2012).

Researchers have shown that having a pet can positively influence emotional experiences and the perception of family dynamics among adults and children (Vidović & Bratko, 1999). For example, children who have pets and report a close relationship with their pets perceive their family environments as significantly more positive than children who do not have pets. If a dog was present during a physical examination, children will experience the event as less stressful (Baun, Oetting, & Bergstrom, 1991).

Among adults, women with dogs have shown signs of relaxation in ways that women without dogs have not demonstrated (Allen, 2003). This information may show why the abuse of companion animals is so traumatizing, as that animal is often one of the only consistent sources of unconditional love and support for children in abusive and neglectful homes (Vollum et al., 2004).

The link. *The link* refers to how the human-animal bond is often exploited by individuals who manipulate, threaten, intimidate, and emotionally harm their human victims (Lacroix, 1998). According to experts, these behaviors are very common in interpersonal violence; most typically when domestic violence (among members of a household) and intimate partner violence are present. In these cases, threatening to harm or actually harming animals is used as leverage to gain compliance and revenge, and to cause harm to the person who is bonded to the abused animal (Linzey, 2009). In abuse involving children, abusive caretakers use threats of and harm to animals to control, intimidate, exploit, and to silence their victims (Ascione & Arkow, 1999). Animal abuse is a powerful tool of manipulation and is often used to send a message to the victims that they are vulnerable to similar acts of violence (Ascione, 1997). The literature has shown that violent individuals exert "power and control" (Simmons & Lehmann, 2007, p. 1220) over others through harming animals.

Researchers have suggested that animal cruelty is often used to intimidate or coerce victims into returning to the relationships after leaving or into dropping legal charges (Ascione, 1997; Ascione et al., 1997). The researcher of the current study suggested that the often extended period of abuse, which might not necessarily be present

without the acts of animal cruelty, made it more difficult for victims to heal from their abuse.

Psychological and Emotional Effect to Secondary Victims

Literature has shown that in cases of domestic conflict, animals are often used as "instruments of psychological and physical terror by one human against another or as objects against which humans vent aggression, whether pent up or learned" (Widom, 2000, p. 5). Most women in shelters said that they were emotionally close to their companion animals and were distressed by cruelty toward the family pets. This finding was accurate for women without children as well, "who may have had stronger pet attachments" (Widom, 2000, p. 164). Other researchers have theorized that cruelty toward pets inflicts psychological trauma on women (Faver & Strand, 2007). Faver and Strand (2007) believed that to grasp the effect of pet abuse fully, further researchers must investigate the relationship between abused women and their pets to understand the mental health consequences of the women's attachment to their pets.

There is little research on how animal cruelty affects the human secondary victims involved. However, a researcher may make inferences about the impacts by studying how general domestic violence influences individuals involved and by analyzing research previously done on the human and animal bond. The current research filled this gap in significant data.

Animal Cruelty and Future Criminality

There is support for the notion that animal cruelty may occur in association with additional forms of interpersonal violence, such as domestic violence. Evidence has shown that perpetrators with records of animal abuse can typically be linked to other

criminal behavior (Arluke et al., 1999). Likewise, similar research has shown the link between animal cruelty seen in children and later adult criminality (Arluke, 2010). Further research has shown that witnessing animal cruelty in the home, as a child, has a direct correlation with committing animal abuse (Henry, 2004). These data indicated that children witnessing acts of callousness and violence toward animals often suffer emotional and psychological trauma, and they might lack necessary lessons in empathy that would prevent later criminality (Eisenberg & Morris, 2001).

Several studies have shown a relationship between experiencing physical abuse and emotional deprivation as a child and the occurrence of violent crimes in adulthood (DeGue & DiLillo, 2008; DeViney, Dickert, & Lockwood, 1998; Duncan & Miller, 2002). As far as predictive validity, the abusive family context as well as childhood animal abuse links this behavior to adult violence; however, "the most effective intervention found [for the treatment of animal abuse in children] was the removal of the child from the abusive home environment" (Tapia, 1971, p. 74).

Modeling. Boat (1995) suggested that witnessing parental animal cruelty (seen in most homes where child abuse occurs) does not provide the child with a good role model to demonstrate suitable behaviors with animals and humans. Others proposed a theory-based model to explain the influence of a violent family context on childhood animal cruelty: "Abusive family members use aversive and punitive techniques to terminate each other's behaviors … A possibility exists that children in these families will learn and use such controlling or punitive styles on pets" (Patterson, DeBaryshe, & Ramsey, 1989, p. 31).

Empathy. Discussion on empathy development is presented as a way to illustrate one of the many ways that the effects of animal abuse, especially in which a condition may be child abuse, transfers into adult violent behavior. Findings have indicated that parental aggression toward an animal, probably due to or including a little parental empathy, may result in insufficient empathy development in the child. The absence of empathy, along with the lack of development of emotional regulating coping mechanisms, may not only lead to animal mistreatment in children but also later adult violence and aggression (Duncan & Miller, 2002, p. 375).

Summary

The researcher explored how previous experience with animal cruelty, as a secondary victimization, influenced the mental health of the secondary victim. The researcher retrospectively assessed animal cruelty experiences on the mental health of victims of domestic violence to determine whether the psychological sequelae of secondary victimization of animal cruelty was different when compared to the impact of other trauma. Along with linking the crimes from the secondary victim's perspective, this researcher explored how secondary victims of animal cruelty coped—emotionally and psychologically—with their trauma compared to those with no animal cruelty as a secondary victimization. Data collection were achieved through the review of post-traumatic stress disorder (PTSD) self-report scales, trauma symptom self-reports, and direct interview with participants. The current researcher assessed whether negative experiences with pets changed how a crime victim could cope with trauma and stress in later life. The researcher determined whether secondary victimization to animal cruelty was associated with higher levels of victimization.

Chapter 3: Methodology

The purpose of this mixed methods study was to investigate how previous experiences with animal cruelty as a secondary victimization influenced the mental health and patterns of relationships in the later lives of victims of domestic violence. Specifically, a retrospective analysis was done on victims of domestic violence to find out whether they had, at all, experienced animal cruelty. A comparison was made to investigate how victims who had experiences with animal cruelty cope, emotionally and psychologically with their traumas, compared to those who had no animal cruelty experiences as a secondary victimization. Eliciting stories of lived experiences from victims of domestic violence with or without experiences with animal cruelty provided a foundation for the exploration of perceptions, behaviors, and attitudes of how past experiences affected the mental health and traumatic reactions of a person in general. In addition, by quantitatively measuring these traumatic tendencies of a person through a comparison of PTSD symptoms and trauma scales scores, insights were richer and more significant to the intended stakeholders of this study. The number of crime victimizations following the experience with animal cruelty was collected per participant. A combination of qualitative semistructured interviews and quantitative survey measuring PTSD symptoms, trauma scales, and number of crime victimizations was employed to collect data for the study. Content analysis and inferential statistics were conducted to analyze qualitative and quantitative data, respectively.

This chapter contains an outline of the research method, followed by the research design, appropriateness of design, research questions, hypotheses, target population,

instrumentation, data collection procedures, data analysis, and limitations discussed in the subsequent sections. A summary concludes the chapter.

Research Question and Hypotheses

The research questions for this study were threefold with two questions pertaining to the quantitative part and one question pertaining to the qualitative part. The research questions and corresponding hypotheses that guided this study were as follows:

Research Question 1 (Quantitative): Is there a significant difference in the type, severity, or frequency of psychological symptoms when comparing those who have experienced animal cruelty versus those who have not?

H_{01}: There is no significant difference the type, severity, or frequency of psychological symptoms when comparing those who have experienced animal cruelty versus those who have not.

H_{a1}: There is a significant difference in the type, severity, or frequency of psychological symptoms when comparing those who have experienced animal cruelty versus those who have not.

Research Question 2 (Quantitative): Among those who have been secondary victims of animal cruelty, is there a pattern of psychological symptoms that characterize the experiences of these persons?

H_{02}: There is no pattern of psychological symptoms that characterize the experiences of secondary victims.

H_{a2}: There is a pattern of psychological symptoms that characterize the experiences of secondary victims.

Research Question 3 (Qualitative): What are the lived experiences of animal cruelty as a secondary victimization in the general crime victim population? Is there a prevalence of victims who have experienced (during adulthood or childhood) animal cruelty as a secondary victimization?

Research Method and Design

A mixed methods approach was chosen for this study. The researcher not only explored the lived experiences of participants but also tested the relationships and differences of the variables between animal cruelty and violent crime victimization, thus the need for both qualitative and quantitative methods. Qualitative researchers explore the behavior, perceptions, and attitudes of participants in pursuit of understanding through one's actions (Silverman, 2010). Qualitative data may be used to comprehend participants' ideas or understanding, explain specific human incidents, or develop the understanding of an intricate event (Kvale & Brinkmann, 2009). Meanwhile, quantitative researchers use numbers geared toward providing a description of trends or to determine the relationships among variables (Creswell, 2012). To explore a topic in numbers with a description of trends or to explain a relationship among variables requires establishing the overall tendency of responses from participants (Creswell, 2012).

Qualitative researchers provide a thorough study that can bring a researcher to new observations. This process may provide an opening for more focused examination of a study's prevalence, predictors, and sequence in other studies (Punch, 2013). The qualitative study approach is inquiry-based through exploring phenomena using questions, narrative descriptions, and the analysis of emerging themes (Silverman, 2010). Thus, a qualitative research design, specifically a phenomenological approach, was used.

The phenomenological researcher focuses on examining the lived experiences of participants to explain the phenomenon under consideration (Finlay, 2009); for this study, the phenomenon was the relationship between animal cruelty and violent crime victimization.

Furthermore, a comparative correlational quantitative research design, through a survey technique, was used to measure the variables, identify underlying relationships, and compare the groups of participants. The correlational design does not imply causation and cannot be construed as such (Johnson & Christensen, 2010). This current researcher used the correlational design to examine the relationship between two variables. Specifically, the researcher examined whether previous exposure to animal cruelty affected the mental health and traumatic reactions of a person in general. Furthermore, the comparative design allowed the researcher to compare different types of measures (PSTD and traumatic scales) among one group of individuals to ascertain the nature of the relationship (see Ary, Jacobs, Sorensen, & Walker, 2013). In the present study, the comparative correlation design measured how previous experiences with animal cruelty as a secondary victimization affected the mental health and patterns of relationships in the later lives of victims of domestic violence.

Participants

The target population for this study was individuals who were victims of domestic violence. Purposive sampling was conducted to make sure that subjects were within the parameters set for the study (see Creswell, 2012; Silverman, 2010). This process ensured credibility and circumvented potential biases.

Sample size. The sample size estimate for the quantitative part depended on three factors. These factors included the level of significance, power, and effect size. For the level of significance, this size was usually set equal to $\alpha = .05$ (Hox, 2002). The power of a statistical test corresponded to the probability of rejecting the null hypothesis when it was not true. Conventionally, a power of .80 was considered a high power; a power of this magnitude would keep the sample size reasonable and within acceptable limits (see Hox, 2002). Finally, according to Cohen (1988), the effect is the strength of the relationship between the independent and dependent variables in the study. The effect sizes were divided into three categories, namely small, medium, and large effect size (see Cohen, 1988). The three factors listed also depended on the kind of analysis completed. To determine the desired sample size, the estimate was based on the statistical procedure that requires the largest number of individuals because each statistical test had different power for the number of participants to make a valid inference.

Based on this information, the statistical procedure required the largest number of individuals to make inferences through the one-way ANOVA. With the one-way ANOVA, the number of groups compared with one another were considered when determining the sample size. The largest number of groups that was compared with one another was two. Using this information, along with assuming that a power of .80, a level of significance of .05 and an effect size of $f = .30$ was used; the resulting minimum sample size required for the study was 128. The sample size for this study was calculated in G*Power using the ANOVA comparison.

For the qualitative portion, only a small sample size of subjects is usually involved. Creswell (2012) recommended a sample size of between one and 25

participants. Polkinghorne (2005) recommended a sample size of between five and 25 participants. No explicit rule for the sample size of a qualitative study exists (Patton, 1990); thus, the decision would typically be dependent on the aims of the researcher, the reason for doing the research, and the availability of resources, including time (Silverman, 2010). The content analysis qualitative tool can accommodate sizes of around five to 25; thus, the researcher had a small purposive sample of around 10 to 15 participants.

Instruments

For the quantitative portion of the research, the survey instrument was Weathers, Litz, Herman, Huska, and Keane's (1993) Short Form of the PTSD Checklist – Civilian Version. The PCL scale survey was a standardized self-report rating scale for PTSD consisting of 17 items that corresponded to the key symptoms of PTSD. Two versions of the PCL were compiled: (a) PCL-M was specific to PTSD caused by military experiences, and (b) PTSD Checklist – Civilian Version (PCL-C) was used for any other traumatic event. The PCL was adapted for particular time frames or events with ease. For example, instead of inquiring about "the past month," questions could be adapted to inquire about "the past week" or be adapted to find occurrences during childhood (Weathers, Litz, Herman, Huska, & Keane, 1994). The survey comprised 17 items measuring stressful life experiences of an individual. Respondents rated items on a 5-point scale (ranging from *1 = Not at all* to *5 = Extremely*). A total score was calculated by adding the 17 items; therefore, the scores ranged from 17 to 85.

Used as a continuous measure, the PCL had good diagnostic utility. Weather's et al. (1993) tested the survey using test-retest reliability and showed higher than 0.90

coefficient. Moreover, the authors reported that internal consistency was high for each of the three groups of items corresponding to the DSM-IV symptom clusters and for the full 17-item scale. All other mental health status information, such as trauma symptom reports, crime victimization reports, demographics, and bio-psycho-social information, will be received through the review of information previously collected by the participating victim services agency.

For the qualitative portion of this research, the researcher used Boat's (1995) Inventory on Animal-Related Experiences, a semi-structured tool employed as a screening and information-gathering instrument. Open-ended questions of this survey gave subjects the chance to express their views and emotions openly, while not limited by a set of choices (Kvale & Brinkman, 2009). Questions concentrated on characterizing participants' past experiences related to animal cruelty and how such experiences affected their mental health and traumatic reactions afterwards.

Procedure

The informed consent was used as consent to partake in the research and was accepted by the subjects. The informed consent form included a description of the study and its purpose. Participants were told how much time was needed to complete the interview and survey, along with other relevant information. The potential participants were informed that they could discontinue their participation at any point during the study if they so wished, without any subsequent consequences. The participants were made aware that there was no risk involved in completing the survey instruments. Participants' identities were protected by assigning a unique identification number to each participant. Participants must understand and sign the informed consent form prior

to being scheduled for an interview and directed to answer the survey instrument, which included their demographic information.

All data were gathered from the BIARE questionnaire, demographic questionnaire, and the PCL-C, accompanied by the signed informed consent form, where participants agreed to the terms of the study. Completed survey material were returned to the researcher. The data provided by each participant were kept in a locked filing cabinet. Raw data from the survey instrument were imported and saved in a password-protected computer file. The responses from the survey were entered into a Microsoft Excel® spreadsheet, where each participant who completed the survey instrument represented a unique observation. These spreadsheets were imported into SPSS Version 18.0 for analyses. For printed information, the survey data will be kept in a locked filing cabinet for 5 years, and only the researcher will have access. In this way, the privacy of participants will be maintained.

Data Analysis

The data analysis comprised content analysis for the qualitative portion, and descriptive and correlational analyses using statistics (i.e., Pearson's correlation coefficients, independent samples *t*-tests, and ANOVA) for the quantitative portion. Content analysis was completed using NVivo Version 10.0®, while the quantitative analyses was conducted in SPSS Version 18.0®.

Descriptive statistics (quantitative data). The descriptive statistics computed for this study included frequency distributions and measures of central tendency. For the frequency distributions, the number and percentage of each occurrence are presented for the categorical or dichotomous variables in the study. These include the gender of the

participants and the other demographic characteristics. The measures of central tendency include the mean, standard deviation, and minimum and maximum values for the continuous variables in the study. These variables include the scores from the PTSD and trauma scales.

Pearson's correlation coefficients (quantitative data). To address the first research questions and hypotheses, Pearson's correlation coefficients were used. Pearson's correlation coefficient was used to determine whether there was a significant relationship between two continuous level variables. The correlation coefficient had a range of values from –1 to +1, with a correlation of around –1, indicating that there was a perfect negative correlation, while a correlation of around +1 indicated that there was a perfect positive correlation (see Moore, McCabe, & Craig, 2009).

The variables assessed using the Pearson's correlation coefficient were the following independent variables: (a) animal cruelty experience, (b) emotional attachment, (c) intelligence level, (d) psychological issues, (e) level of current trauma, and (f) culture vis-à-vis the dependent variable PTSD and trauma scores. Should the test statistic exceed a critical value at the .05 level of significance, it was concluded that there was a significant relationship between the variables.

Analysis of variance (ANOVA). To address the second research question and hypothesis, an ANOVA was conducted. The ANOVA was a test that compared means taken from two or more independent groups to determine if there was a significant difference between the two groups (see Tabachnick & Fidell, 2012). Therefore, the ANOVA was used to determine if there was a difference in the mean scores of the dependent variable (PTSD and trauma scores) against the demographical profile of the

participant. The reason the ANOVA was used for these variables was because the demographics of the participant were dichotomous variables, while the dependent variable was continuous.

The significance of the relationship between the variables was determined by an *F*-statistic. If the test statistic exceeded a critical value at the .05 level of significance, then it was concluded that there was a significant difference. A post-hoc test, using a *t*-statistic, was used to determine how the groups differ from one another, if the resulting ANOVA was found significant.

Content analysis (qualitative data). Exploration of the data occurred with the review of the BIARE questionnaire. The data were coded into appropriate groups of related themes found within the data. Coding involved organizing data into categories associated with the framework and questions directing the study in a way that the data were used to support analysis and interpretation. Responses were coded within the NVivo Version 10.0® software. Emerging themes discovered were described and analyzed for inductive content analysis.

Limitations

This mixed methods study had several limitations. Data from the survey questionnaires were influenced by the desires of the participants to please or support the researcher. Thus, the participants might not identify their own answers or be honest in their responses and might opt to provide supportive answers for the researcher's benefit. More so, the researcher collected the quantitative data through self-administered survey questionnaires, not face-to-face interviews; thus, clarifications regarding answers in the survey were not possible. Furthermore, in cases where participants were unsure, they

were limited to their own understanding of the questions in the instruments. Finally, although this researcher provided in-depth descriptions regarding the experiences of participants, participants were selected purposely, rather than randomly, using a sample size of 20 to 25 for the qualitative portion of the study. Therefore, it might not be possible to generalize to a larger population. However, efforts were made to ensure that a broad range of participants were selected to be as representative in their responses as possible.

Chapter 4: Results

Introduction

The purpose of this mixed methods study was to investigate how previous experiences with animal cruelty as a secondary victimization influenced the mental health and patterns of relationships in the later lives of victims of domestic violence. This chapter presents the results of the quantitative part of the study. The quantitative portion of the study used a comparative correlational research design to determine whether previous exposure to animal cruelty influenced the mental health and traumatic reactions of a person in general. Descriptive statistics analysis, independent sample *t*-test, and ANOVA were conducted to address the objectives of this current study. Two research questions and hypotheses guided this quantitative part, and these were as follows:

Research Question 1 (Quantitative): Is there a significant difference in the type, severity, or frequency of psychological symptoms when comparing those who have experienced animal cruelty versus those who have not?

H_{01}: There is no significant difference the type, severity, or frequency of psychological symptoms when comparing those who have experienced animal cruelty versus those who have not.

H_{a1}: There is a significant difference in the type, severity, or frequency of psychological symptoms when comparing those who have experienced animal cruelty versus those who have not.

Research Question 2 (Quantitative): Among those who have been secondary victims of animal cruelty, is there a pattern of psychological symptoms that characterize the experiences of these persons?

H_{02}: There is no pattern of psychological symptoms that characterize the experiences of secondary victims.

H_{a2}: There is a pattern of psychological symptoms that characterize the experiences of secondary victims.

Chapter 4 is organized by a discussion of the data collection, including a discussion of the sample demographics. Then, the discussion of the results concerns descriptive statistics, and then the results of the hypothesis testing involving the independent sample *t*-test and ANOVA are presented. The chapter ends with a summary. Data were analyzed with SPSS 24.

Data Collection

A sample of 139 victims of domestic violence was included in this quantitative portion of the mixed method study. Table 1 summarizes the demographic information of the 135 individuals. All the samples that declared genders were female. For age, greater frequencies of the samples were aged 26 to 35 years old (40; 28.8%) and 36 to 45 years old (48; 34.5%). For race, half of the 139 individuals were White (74; 53.2%). There were also significant frequencies among the 139 samples that were Black or African American (33; 23.7%). For highest educational attainment, the top three highest greater frequencies the samples have earned bachelor's degree (38; 27.3%), have some college (32; 24.5%), and high school graduate only (29; 20.9%). For monthly income level, almost half of the 139 individuals earned $5,000 or below (65; 46.8%). There were also significant frequencies among the 139 samples with a monthly income of $5,001 to $10,000 (49; 35.3%).

In terms of experiencing animal cruelty in the past, less than half or 68 (48.9%) of the 139 samples have animal cruelty experiences with one of their pets from their abuser or abusers. Most (123; 88.5%) of the 139 samples have ever, at any time, owned pets. More than half (83; 59.7%) of the 139 samples have currently own any pets. More than half (75; 54%) of the 139 samples had a pet that was hurt or neglected, and almost half (68; 48.9%) of the 139 samples responded that this act was deliberate. Less than half (67; 48.2%) of the 139 samples had been afraid or worried that something would happen to their pets. Less than half (50; 36%) of the 139 samples believed that they had witnessed animal cruelty in their homes.

Table 1

Frequency and Percentage Summaries of Demographic Information

	Frequency	Percent
Gender		
Female	134	96.4
Missing	5	3.6
Age		
18-25 years old	19	13.7
26-35 years old	40	28.8
36-45 years old	48	34.5
46-55 years old	21	15.1
55 years old and above	7	5
Missing	4	2.9
Race		
White	74	53.2
Black or African American	33	23.7
Asian	4	2.9
Pacific Islander	2	1.4
Others	22	15.8
Missing	4	2.9
Highest educational attainment		
High school graduate	29	20.9
Some college	34	24.5
Bachelor's degree	38	27.3
Associate degree	24	17.3
Postgraduate degree	10	7.2
Missing	4	2.9
Income level per month		
$5,000 and below	65	46.8
$5,001 – $10,000	49	35.3
$10,001 - $15,000	15	10.8
$16,001 - $20,000	5	3.6

	Frequency	Percent
Missing	5	3.6
Have you ever, at any time, owned pets?		
Yes	123	88.5
No	14	10.1
Missing	2	1.4
Do you currently own any pets?		
Yes	83	59.7
No	54	38.8
Missing	2	1.4
Has a pet of yours ever been hurt or neglected?		
Yes	75	54
No	62	44.6
Missing	2	1.4
Was this accidental or deliberate?		
Accidental	8	5.8
Deliberate	68	48.9
Missing	63	45.3
Have you ever been afraid or worried that something would happen to your pet?		
Yes	67	48.2
No	63	45.3
Missing	9	6.5
Do you believe that you have been a witness of animal cruelty in your home?		
Yes	50	36
No	80	57.6
Missing	9	6.5
Animal Cruelty		
Yes	68	48.9
No	71	51.1

Results

Descriptive statistics summaries of study variable. Scores for the dependent variable of interest of PTSD and trauma score, as measured by the PLC-C, was computed. Descriptive statistics summaries were computed to summarize the data of the score for the PTSD and trauma scores. The descriptive statistics are summarized in Table 2. The mean score of the PTSD and trauma score was 42.10 (*SD* = 23.79). The mean score of PTSD and trauma score was in the lower end of the 17 to 85 range of possible scores. These scores indicated that the 139 individuals had low levels of PTSD and trauma or had low frequency of stressful life experiences. The boxplot in Figure 1 shows that there are no outliers in the data of PTSD and trauma scores between the two groups

of those individuals who experienced animal cruelty and those individuals who did not experience animal cruelty in the past.

Table 2

Descriptive Statistics Summaries of Post-Traumatic Stress Disorder and Trauma Score

	N	Minimum	Maximum	Mean	Std. Deviation
PCL-C Scores	139	4	85	42.10	23.79

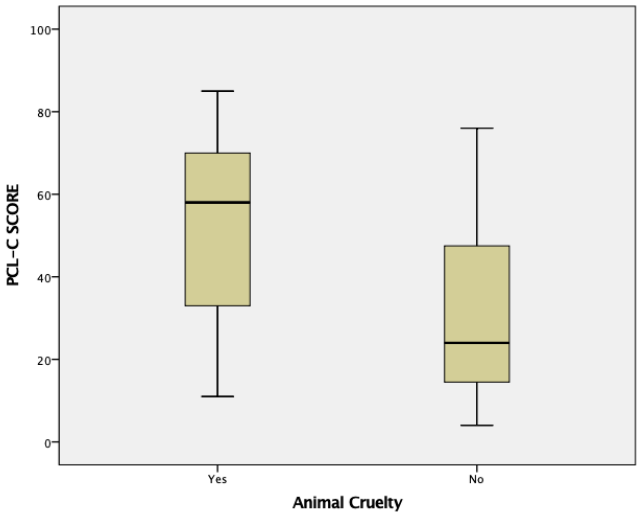

Figure 1. Box plot of post-traumatic stress disorder and trauma score by animal cruelty experience.

Research Question 1. The independent sample *t*-test was conducted to address the Research Question 1 to determine if there was a significant difference in the severity or frequency of psychological symptoms of the PTSD and trauma scores when comparing those who have experienced animal cruelty versus those who have not experienced animal cruelty. A level of significance of 0.05 was used in the independent sample *t*-test. The results of the independent sample *t*-test are presented in Table 3.

First, the required assumption of homoscedasticity was tested. The results of the Levene's test of equality of variance showed that the variance of the dependent variable

of PTSD and trauma scores was homogeneous between the two categoriees of animal cruelty experience ($F = 0.24$, $p = 0.62$). Homoscedasticity assumption was not violated because the p-value was greater than the level of significant value of 0.05. Results of the independent sample t-test of difference showed that there was a significant difference in the PTSD and trauma scores between those who have experienced animal cruelty versus those who have not, $t(137) = 5.52$, $p < 0.001$. Mean comparison showed that those individuals who have experienced animal cruelty ($M = 52.43$, $SD = 21.83$) have significantly higher PTSD and trauma scores indicating higher severity or frequency of psychological symptoms than those individuals who have not experienced animal cruelty ($M = 32.21$, $SD = 21.38$) by a mean difference of 20.22. With this result, the null hypothesis for Research Question 1 was rejected. Instead, results of the independent sample t-test supported the alternative hypothesis of the following: There is a significant difference in the type, severity, or frequency of psychological symptoms when comparing those who have experienced animal cruelty versus those who have not.

Table 3

Descriptive Statistics Summaries of PTSD and Trauma Scores of Animal Cruelty Experiences

	Animal cruelty	*N*	Mean	Std. deviation	Std. error mean
PCL-C Scores	Yes	68	52.43	21.83	2.65
	No	71	32.21	21.38	2.54

Table 4

Results of Independent Sample t-Test of Differences of Post-Traumatic Stress Disorder and Trauma Scores by Animal Cruelty Experience

	t	*df*	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
						Lower	Upper
PCL-C scores	5.52	137	0.00	20.22	3.67	12.97	27.46

Research Question 2. The ANOVA was conducted to address Research Question 2 to determine if there was a significant difference in the mean scores of the PTSD and trauma scores against the demographical profile of the individuals. The demographic profiles included age, race, highest educational attainment, monthly income level, ownership of pet, current ownership of pet, being afraid and worried that something would happen to pet, and witness of animal cruelty at home, A level of significance of 0.05 was used in the ANOVA. The results of the ANOVA are presented in Table 5.

First, the required assumption of homoscedasticity was tested. The results of the Levene's test of equality of variance showed that the variance of the dependent variable of PTSD and trauma scores was homogeneous across the different categories of the different demographics, $F(111, 13) = 0.83$, $p = 0.72$. Homoscedasticity assumption was not violated because the *p*-value was greater than the level of significant value of 0.05. Results of the ANOVA showed that there was significant difference in the PTSD and trauma scores of individuals with different monthly income levels, $F(3, 104) = 2.79$, $p = 0.04$. The effect size of monthly income levels on PTSD and trauma scores was low with partial eta squared value of 0.08.

Post-hoc test results using Tukey's statistics showed that only significant differences occurred in the PTSD and trauma scores between individuals who have monthly incomes of $5,001 and $10,000 and individuals who have monthly incomes of $16,001 to $20,000 ($p = 0.02$). The mean comparison showed that those individuals who have monthly incomes of $16,001 to $20,000 ($M = 65.00$, $SD = 22.54$) have significantly higher PTSD and trauma scores indicating higher severity or frequency of psychological symptoms than those individuals who have monthly incomes of $5,001 and $10,000 ($M = 37.59$, $SD = 23.53$) by a mean difference of 28.02. This finding means that individuals with higher monthly income levels have greater severity or frequency of psychological symptoms. With this result, the null hypothesis for Research Question 2 was rejected. Instead, results of the ANOVA supported the alternative hypothesis of the following: There is a pattern of psychological symptoms that characterize the experiences of secondary victims.

Table 5

ANOVA Results of Differences of Post-Traumatic Stress Disorder and Trauma Scores by Demographics

Source	Type III sum of squares	*df*	Mean square	*F*	Sig.	Partial eta squared
Corrected model	28485.516[a]	20	1424.28	3.38	0.00*	0.39
Intercept	30027.94	1	30027.94	71.18	0.00*	0.41
Animal Cruelty	4609.22	1	4609.22	10.93	0.00*	0.10
Age	1583.14	4	395.78	0.94	0.45	0.04
Race	797.11	4	199.28	0.47	0.76	0.02
Highest educational attainment	3862.10	4	965.53	2.29	0.07	0.08
Income level per month	3532.58	3	1177.53	2.79	0.04*	0.08
Have you ever, at any time, owned pets?	55.14	1	55.14	0.13	0.72	0.00
Do you currently own any pets?	41.84	1	41.84	0.10	0.75	0.00
Have you ever been afraid or worried that something would happen to your pet?	138.38	1	138.38	0.33	0.57	0.00
Do you believe that you have been a witness of animal cruelty in your home?	30.27	1	30.27	0.07	0.79	0.00
Error	43874.45	104	421.87			
Total	292692.00	125				
Corrected Total	72359.97	124				

Note. Dependent variable: PCL-C score
a. *R* Squared = 0.39 (Adjusted *R* Squared = 0.28)
*Significant at level of significance of 0.05

Table 6

Descriptive Statistics Summaries of Post-Traumatic Stress Disorder and Trauma Scores by Age

Age	*N*	Mean	Std. deviation	Minimum	Maximum
18-25 years old	19	38.74	22.76	5	75
26-35 years old	40	37.73	23.38	4	80
36-45 years old	48	45.40	25.10	8	85
46-55 years old	21	39.86	22.29	12	84
55 years old and above	7	52.43	21.59	15	80
Total	135	41.69	23.71	4	85

Table 7

Descriptive Statistics Summaries of Post-Traumatic Stress Disorder and Trauma Scores by Race

Race	*N*	Mean	Std. deviation	Minimum	Maximum
White	74	45.11	23.65	4	85
Black or African American	33	39.82	25.40	5	84
Asian	4	34.50	17.23	24	60
Pacific Islander	2	45.50	43.13	15	76
Others	22	34.77	21.14	6	83
Total	135	41.82	23.79	4	85

Table 8

Descriptive Statistics Summaries of Post-Traumatic Stress Disorder and Trauma Scores by Highest Educational Attainment

Highest educational attainment	*N*	Mean	Std. deviation	Minimum	Maximum
High school graduate	29	45.31	23.82	5	83
Some college	34	35.29	21.74	6	85
Bachelor's degree	38	40.00	22.62	8	84
Associate degree	24	42.58	26.23	4	84
Postgraduate degree	10	60.80	21.01	16	82
Total	135	41.96	23.78	4	85

Table 9

Descriptive Statistics Summaries of Post-Traumatic Stress Disorder and Trauma Scores by Monthly Income Level

Income level per month	*N*	Mean	Std. deviation	Minimum	Maximum
$5,000 and below	65	41.91	23.60	4	83
$5,001 – $10,000	49	37.59	23.53	8	85
$10,001 - $15,000	15	50.13	21.56	10	80
$16,001 - $20,000	5	65.00	22.54	28	84
Total	134	42.11	23.80	4	85

Table 10

Descriptive Statistics Summaries of Post-Traumatic Stress Disorder and Trauma Scores by Ownership of Pet

Have you ever, at any time, owned pets?	*N*	Mean	Std. deviation	Minimum	Maximum
Yes	123	43.51	23.44	4	85
No	14	29.00	22.67	6	74
Total	137	42.03	23.70	4	85

Table 11

Descriptive Statistics Summaries of Post-Traumatic Stress Disorder and Trauma Scores by Current Ownership of Pet

Do you currently own any pets?	*N*	Mean	Std. Deviation	Minimum	Maximum
Yes	83	45.36	23.67	4	85
No	54	36.91	23.02	5	84
Total	137	42.03	23.70	4	85

Table 12

Descriptive Statistics Summaries of Post-Traumatic Stress Disorder and Trauma Scores by Being Afraid and Worried That Something Would Happen to Pet

Have you ever been afraid or worried that something would happen to your pet?	*N*	Mean	Std. deviation	Minimum	Maximum
Yes	67	50.54	22.45	10	85
No	63	33.19	22.35	4	84
Total	130	42.13	23.95	4	85

Table 13

Descriptive Statistics Summaries of Post-Traumatic Stress Disorder and Trauma Scores by Belief of Being Witness of Animal Cruelty at Home

Do you believe that you have been a witness of animal cruelty in your home?	*N*	Mean	Std. deviation	Minimum	Maximum
Yes	50	53.34	21.64	12	85
No	80	35.13	22.74	4	83
Total	130	42.13	23.95	4	85

Table 14

Tukey's Post-Hoc Test Results of Difference of Post-Traumatic Stress Disorder and Trauma Scores Per Monthly Income Levels

(I) Income level per month	(J) Income level per month	Mean difference (I-J)	Std. error	Sig.	95% Confidence interval	
					Lower bound	Upper bound
$5,000 and below	$5,001 – $10,000	5.54	4.00	0.51	-4.91	15.98
	$10,001 - $15,000	-6.25	6.28	0.75	-22.66	10.15
	$16,001 - $20,000	-22.48	9.56	0.09	-47.45	2.48
$5,001 – $10,000	$10,001 - $15,000	-11.79	6.44	0.26	-28.6	5.02
	$16,001 - $20,000	-28.02*	9.66	0.02	-53.25	-2.79
$10,001 - $15,000	$16,001 - $20,000	-16.23	10.81	0.44	-44.45	11.99

Note. Based on observed means.
The error term is mean square(error) = 421.870.
*. The mean difference is significant at the level of significance of 0.05.

Summary

The purpose of this mixed methods study was to investigate how previous experiences with animal cruelty as a secondary victimization influenced the mental health and patterns of relationships in the later lives of victims of domestic violence. For Research Question 1, results of the independent sample *t*-test showed that there was a significant difference in the type, severity, or frequency of psychological symptoms when comparing those who had experienced animal cruelty versus those who had not experienced animal cruelty. Specifically, individuals who had experienced animal cruelty had significantly higher severity or frequency of psychological symptoms than those individuals who had not experienced animal cruelty. For Research Question 2, results of the ANOVA showed that there was a pattern of psychological symptoms that characterized the experiences of secondary victims. Specifically, there was a significant difference in the PTSD and trauma scores of individuals with different monthly income

levels. Individuals with higher monthly income levels had greater severity or frequency of psychological symptoms.

Implications of the results of the data analysis are discussed in detail in Chapter 5. Suggestions on how the findings may be applied in an organizational setting are discussed in Chapter 5. Chapter 5 then presents a summary of recommendations for future research.

Chapter 5: Discussion

Animal cruelty and the secondary victimization of humans due to these incidents of animal cruelty are significant social problems. People have intense negative reactions to animal cruelty cases published in the media, which indicates that the general public cares about proper treatment of animals (Vollum et al., 2004). Seeing animal cruelty has emotional and psychological effects to witnesses. These witnesses experience secondary victimization. The current researcher posed questions about the effects of animal cruelty to humans with the objective of putting significance on greater animal protection and policy reform. The researcher explored how men and women who had been secondary victims of animal cruelty healed from their traumas compared to individuals who had no experiences with animal cruelty through secondary victimization. The purpose of this mixed methods study was to investigate how previous experiences with animal cruelty as a secondary victimization influenced the mental health and patterns of relationships in the later lives of victims of domestic violence.

A sample of 139 individuals who were victims of domestic violence was included in this quantitative portion of the mixed method study. Weathers et al.'s (1993) Short Form of the PTSD Checklist – Civilian Version was used. In terms of experiencing animal cruelty in the past, less than half or 68 (48.9%) of the 139 samples has animal cruelty related experiences with one of their pets from their abuser or abusers. Independent sample *t*-test was conducted to address the Research Question 1 to determine if there was a significant difference in the severity or frequency of psychological symptoms as by the PTSD and trauma scores when comparing those who had experienced animal cruelty versus those who had not experienced animal cruelty.

ANOVA was conducted to address the Research Question 2 to determine if there was a significant difference in the mean scores of the PTSD and trauma scores against the demographical profile of the individuals.

For Research Question 1, results of the independent sample *t*-test showed that there was a significant difference in the type, severity, or frequency of psychological symptoms when comparing those who had experienced animal cruelty versus those who had not experienced animal cruelty. Specifically, individuals who had experienced animal cruelty had significantly higher severity or frequency of psychological symptoms than those individuals who had not experience animal cruelty. For Research Question 2, results of the ANOVA showed that there was a pattern of psychological symptoms that characterized the experiences of secondary victims. Specifically, there was a significant difference in the PTSD and trauma scores of individuals with different monthly income levels. Individuals who had higher monthly income levels had greater severity or frequency of psychological symptoms.

This chapter provides a comprehensive discussion of the findings of the study. The results of the study are interpreted through a comparison with previous studies and through the guidance of the theoretical framework. Specifically, the results are elaborated and interpreted in sequence to each research question. The conclusions and summaries are offered. The implications of the findings are discussed. The limitations of the current study are discussed. Finally, the recommendations for future research are offered.

Interpretation of the Findings

In this section, the results are presented. The results are also interpreted and compared with previous studies about animal cruelty.

Research Question 1 (quantitative). Research Question 1 asked the following: Is there a significant difference in the type, severity, or frequency of psychological symptoms when comparing those who have experienced animal cruelty versus those who have not? The results of the independent sample *t*-test of difference showed that there was a significant difference in the PTSD and trauma scores between those who had experienced animal cruelty versus those who had not, $t(137) = 5.52$, $p < 0.001$. With this result, the null hypothesis for Research Question 1 was rejected. The results supported the alternative hypothesis of the following: There is a significant difference in the type, severity, or frequency of psychological symptoms when comparing those who have experienced animal cruelty versus those who have not.

The finding that individuals who had experienced animal cruelty had significantly higher severity or frequency of psychological symptoms than those individuals who had not experience animal cruelty was supported in the literature. Most studies in the literature focused on victims of intimate partner violence (IPV) and their pets. The different studies showed that those victims were primary victims of IPV, and secondary victims of animal cruelty as the batterers also threatened the pets of these victims. For instance, 100% of respondents in an intimate partner violence study indicated that their companion animals had been verbally or physically assaulted by their partners (DeGue & DiLillo, 2008). In a study by Ascione et al. (2007), more than 46% of the women told the researcher that their abuser either threatened to harm their pets or did harm the pets. In the case of female victims, they were being victimized twice and in different ways, which could affect the type, frequency, and severity of their psychological symptoms. These victims are less likely to leave their abusers and will remain with them because of the

idea that they are protecting their dogs. The abusers exploit the human-animal bond to manipulate, threaten, intimidate and emotionally harm their human victims (Lacroix, 1998). Animals are often used as "instruments of psychological and physical terror by one human against another or as objects against which humans vent aggression, whether pent up or learned" (Widom, 2000, p. 5). The abusers use the animals as leverage to cause more harm to the person who shares a bond with the animal.

Secondary victimization because of animal cruelty also influences children. Children subjected to domestic violence were at almost a three times greater risk to be cruel to animals than those who did not have a history of being exposed to domestic violence (Kogan et al., 2004). Widom (2000) reported that 60% of families with abused children also had pets that were being abused, and in two-thirds of these cases where children were found to be partaking in companion animal cruelty, the fathers were also abusing those very same pets. Similar to female victims in domestic violence, abusers use threats of and harm to animals to control, intimidate, exploit, and to silence their victims. Animal abuse is a powerful tool to manipulate individuals into showing that they are as vulnerable as the animals. Violent individuals exert "power and control" (Simmons & Lehmann, 2007, p. 1220) over others through harming animals. Witnessing violent acts, such as animal violence, makes children suffer emotional and psychological trauma (Eisenberg & Morris, 2001). Thus, these children lack necessary empathy lessons and would engage in criminal behaviors in the future. The absence of empathy, along with the lack of development of emotional regulating coping mechanisms, may not only lead to animal mistreatment in children but also later adult violence and aggression (Duncan & Miller, 2002).

Research Question 2 (quantitative). Research Question 2 asked the following: Among those who have been secondary victims of animal cruelty, is there a pattern of psychological symptoms that characterize the experiences of these persons? The results of the ANOVA showed that there was significant difference in the PTSD and trauma scores of individuals with different monthly income levels, $F(3, 104) = 2.79$, $p = 0.04$. The findings indicated that individuals who had higher monthly income level had greater severity or frequency of psychological symptoms. With this result, the null hypothesis for Research Question 2 was rejected. The results supported the alternative hypothesis of the following: There is a pattern of psychological symptoms that characterize the experiences of secondary victims.

The finding that individuals who had higher monthly income levels had greater severity or frequency of psychological symptoms contributed new knowledge to the literature. There had been no previous study about secondary victims of animal cruelty and their demographic characteristics. The literature showed that animal abuse was concentrated in lower socioeconomic households, such as most crime, though it was seen within all social classes (Flynn, 2001; Munro, 2005). In relation to the current finding, the individuals living in low socioeconomic neighborhoods might be used to animal abuses; thus, it might not affect them as much as individuals living in high socioeconomic neighborhoods who had not often witnessed animal abuse. Individuals from lower socioeconomic households might have been desensitized to having witnessed multiple acts of animal abuse or cruelty.

Implications

The results of this study contributed to the knowledge base regarding literature on secondary victimization because of animal cruelty. The results showed that experiences with animal cruelty had a psychological influence on individuals. Moreover, the results showed that there was a pattern of symptoms that characterized the experiences of secondary victims.

The results of the study support policy changes, such as incorporating animals on domestic violence protective orders, civil court consequences of animal abuse, loss, and damage, the opening women's shelters to pets, and including animal abuse as a separate category in national data collections systems. In the literature, there is an association between animal abuse and domestic abuse in the household (whether the victim is the partner, child, or both). The results can help alert law enforcement to use animal abuse as a way to determine whether other kinds of abuses are occurring and vice versa. The results can inform health professionals, physicians, school teachers, law enforcement, and other community agencies on the signs and symptoms of childhood mistreatment at home.

Early identification of secondary victimization due to animal cruelty is needed. In the literature, evidence showed that children who experienced secondary victimization because they witnessed their primary caregiver abusing or neglecting their animals were more likely to engage in criminal and violent behaviors when they grow up. Thus, social workers and health professionals can use the findings to provide treatment plans to children. Moreover, school leaders should educate their students about animal cruelty issues. Teachers should be educated about how secondary victims are influence, how to

build empathy in high-risk youth, and how to identify early signs of animal cruelty and domestic abuse in families among their students. This act can influence the way that court judges choose to sentence and treat juvenile offenders who are victims of child abuse to prevent further criminality.

More knowledge about the impact of animal cruelty to secondary victims can educate professionals about how they can provide treatment to this population. In the literature, these individuals who experienced secondary victimization due to animal cruelty are also experiencing domestic abuse; thus, mental health professionals should consider this aspect during treatment planning. The results have implications on treating the effects of animal cruelty on secondary victimization, helping to break cycles of abuse and further victimizations that follow.

Local organization leaders can use the results to get more funding as the police often direct grievances regarding animal cruelty to these organizations. These local organization leaders can use those funds to increase their workers and deal with cases reported. Local organization leaders can help the government in educating the community about the relationship among violent crime, animal abuse, and the impact that it has on individuals and families.

The results of the study can inform policymakers about developing policies aimed to address animal cruelty. The results of the study can provide evidence to have stricter laws and enforcement of current laws and more serious punishments or alternative sentencing for abusers. Government agencies should engage in active cross-reporting and information sharing on cases possibly linked with other crime. Such information can be

used to create programs of rehabilitation for the specific needs of animal cruelty offenders.

Limitations of the Study

In this section, the limitations of the study are described. There were several limitations to the study. The method of data collection was a limitation. The participants might have the inclination to provide information that would please or support the researcher. The researcher used self-administered survey questionnaires, not face-to-face interviews. The participants might have clarifications while answering the questionnaire. The sample in the current study was a limitation. There was only a small sample size; thus, the results might not be generalized to the larger population. The results might be only applicable to the participants in the study.

Recommendations

One of the findings was that individuals with higher monthly income levels had greater severity or frequency of psychological symptoms. Future researchers can explore the relationship as there is limited knowledge about the relationship between income level and greater severity or frequency of psychological symptoms in the context of animal cruelty. There has been no previous researcher who examined the role of income level to the severity or frequency of psychological symptoms.

Further research about whether previous exposure to animal cruelty affects the mental health and traumatic reactions of a person in general remains warranted. There needs to be better understanding about the underlying reasons and motivations for the acts of animal cruelty by a specific individual is critical to respond effectively to animal

cruelty from a past, present, and future perspective. Future researchers may provide more information about the relationship between the two phenomenon.

Future researchers can improve the research design and procedure of the current study. First, they can use different instruments measuring secondary victimization and severity or frequency of psychological symptoms. Second, they can focus on victims of domestic violence who have witnessed animal cruelty in the hands of their abuser. This subject will give the study more focus and provide more information about the trauma experienced by this population.

Conclusion

This chapter contained the interpretation and implication of the findings. The purpose of this mixed methods study was to investigate how previous experiences with animal cruelty as a secondary victimization influenced the mental health and patterns of relationships in the later lives of victims of domestic violence. A sample of 139 victims of domestic violence were the participants in the study. A total of 48.9% (68 out of 139) of the participants had animal cruelty related experiences with one of their pets from their abuser or abusers. The first conclusion was that individuals who had experienced animal cruelty had significantly higher severity or frequency of psychological symptoms than those individuals who had not experience animal cruelty. The second conclusion was that individuals who had higher monthly income levels had greater severity or frequency of psychological symptoms.

References

Allen, K. (2003). Are pets a healthy pleasure? The influence of pets on blood pressure. *Current Directions in Psychological Science*, *12*(6), 236–239. doi:10.1046/j.0963–7214.2003.01269.x

Arluke, A. (2004). *Brute force: Animal police and the challenge of cruelty*. Lanham, MD: Purdue University Press.

Arluke, A. (2006). *Just a dog: Understanding animal cruelty and ourselves*. Philadelphia, PA: Temple University Press.

Arluke, A., Levin, J., Luke, C., & Ascione, F. (1999). The relationship of animal abuse violence and other forms of antisocial behavior. *Journal of Interpersonal Violence*, *14*(9), 963–975. doi:10.1177/088626099014009004

Arluke, A., & Luke, C. (1997). Physical cruelty toward animals in Massachusetts, 1975–1996. *Society and Animals*, *5*(3), 195–204. doi:10.1163/156853097x00123

Ary, D., Jacobs, L., Sorensen, C., & Walker, D. (2013). *Introduction to research in education*. New York, NY: Cengage Learning.

Ascione, F. R. (1993). Children who are cruel to animals: A review of research and implications for developmental psychopathology. *Anthrozoos, 6,* 226–247. doi:10.2752/089279393787002105

Ascione, F. R. (1997). Battered women's reports of their partners' and their children's cruelty to animals. *Journal of Emotional Abuse*, *1*(1), 119–133. doi:10.1300/j135v01n01_06

Ascione, F. R., & Arkow, P. (Eds.). (1999). *Child abuse, domestic violence, and animal abuse: Linking the circles of compassion for prevention and intervention*. Lanham, MD: Purdue University Press.

Ascione, F. R., & Shapiro, K. (2009). People and animals, kindness and cruelty: Research directions and policy implications. *Journal of Social Issues*, *65*(3), 569–587. doi:10.1111/j.1540–4560.2009.01614.x

Ascione, F. R. Weber, C. V., Thompson, T. M., Heath, J., Maruyama, M., & Hayashi, K. (2007). Battered pets and domestic violence animal abuse reported by women experiencing intimate violence and by nonabused women. *Violence Against Women*, *13*(4), 354–373. doi:10.1177/1077801207299201

Ascione, F. R., Weber, C. V., & Wood, D. S. (1997). The abuse of animals and domestic violence: A national survey of shelters for women who are battered. *Society and Animals*, *5*(3), 205–218. doi:10.1163/156853097x00132

Baun, M. M., Oetting, K., & Bergstrom, N. (1991). Health benefits of companion animals in relation to the physiologic indices of relaxation. *Holistic Nursing Practice*, *5*(2), 16–23. doi:10.1097/00004650–199101000–00006

Beck, A. M., & Katcher, A. H. (2003). Future directions in human–animal bond research. *American Behavioral Scientist*, *47*(1), 79–93. doi:10.1177/0002764203255214

Beirne, P. (2004). From animal abuse to interhuman violence? A critical review of the progression thesis. *Society and Animals*, *12*(1), 39–66. doi:10.1163/156853004323029531

Beirne, P. (2009). *Confronting animal abuse: Law, criminology, and human–animal relationships*. New York, NY: Rowman & Littlefield.

Berry, C., Patronek, G., & Lockwood, R. (2005). Long–term outcomes in animal hoarding cases. *Animal Law*, *11*, 167–193. Retrieved from https://www.animallaw.info/sites/default/files/vol11_p167.pdf

Block, C. R., & Block, R. L. (1984). Crime definition, crime measurement, and victim surveys. *Journal of Social Issues*, *40*(1), 137–159. doi:10.1111/j.1540–4560.1984.tb01086.x

Boat, B. W. (1995). The relationship between violence to children and violence to animals: An ignored link? *Journal of Interpersonal Violence, 10,* 228–235. doi:10.1177/0886260595010002008

Carlisle-Frank, P., & Flanagan, T. (2006). *Silent victims*. Lanham, MD: University Press of America.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum Associates.

Creswell, J. W. (2012). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: Sage.

Dadds, M. R., Whiting, C., Bunn, P., Fraser, J. A., Charlson, J. H., & Pirola–Merlo, A. (2004). Measurement of cruelty in children: The Cruelty to Animals Inventory. *Journal of Abnormal Child Psychology*, *32*(3), 321–334. doi:10.1023/b:jacp.0000026145.69556.d9

Dane, A. V., & Schneider, B. H. (1998). Program integrity in primary and early secondary prevention: Are implementation effects out of control? *Clinical Psychology Review, 18*(1), 23–45. doi:10.1016/s0272-7358(97)00043-3

Dawkins, M. S. (2008). The science of animal suffering. *Ethology*, *114*(10), 937–945. doi:10.1111/j.1439–0310.2008.01557.x

DeGue, S., & DiLillo, D. (2008). Is animal cruelty a "red flag" for family violence? *Journal of Interpersonal Violence, 24*(6), 1036–1056. doi:10.1177/0886260508319362

DeViney, E., Dickert, J., & Lockwood, R. (1998). The care of pets within child abusing families. In *Cruelty to animals and interpersonal* (pp. 305–313). West Lafayette, IN: Purdue University Press.

Duncan, A., & Miller, C. (2002). The impact of an abusive family context on childhood animal cruelty and adult violence. *Aggression and Violent Behavior*, *7*(4), 365–383. doi:10.1016/s1359–1789(01)00064–7

Eisenberg, N., & Morris, A. S. (2001). The origins and social significance of empathy–related responding: A review of empathy and moral development: implications for caring and justice by ML Hoffman. *Social Justice Research*, *14*(1), 95–120. doi:10.1023/a:1012579805721

Faver, C. A., & Strand, E. B. (2003a). Domestic violence and animal cruelty: Untangling the web of abuse. *Journal of Social Work Education*, *39*(2), 237–253. doi:10.1080/10437797.2003.10779134

Faver, C. A., & Strand, E. B. (2003b). To leave or to stay? Battered women's concern for vulnerable pets. *Journal of Interpersonal Violence*, *18*(12), 1367–1377. doi:10.1177/0886260503258028

Faver, C. A., & Strand, E. B. (2007). Fear, guilt, and grief: Harm to pets and the emotional abuse of women. *Journal of Emotional Abuse*, *7*(1), 51–70. doi:10.1300/j135v07n01_04

Finlay, L. (2009). Exploring lived experience: principles and practice of phenomenological research. *International Journal of Therapy and Rehabilitation, 16*(9), 474–481. doi:10.12968/ijtr.2009.16.9.43765

Flynn, C. P. (2000a). Battered women and their animal companions: Symbolic interaction between human and nonhuman animals. *Society and Animals*, *8*(2), 99–128. doi:10.1163/156853000511032

Flynn, C. P. (2000b). Why family professionals can no longer ignore violence toward animals*. *Family Relations*, *49*(1), 87–95. doi:10.1111/j.1741–3729.2000.00087.x

Flynn, C. P. (2000c). Woman's best friend pet abuse and the role of companion animals in the lives of battered women. *Violence Against Women*, *6*(2), 162–177. doi:10.1177/10778010022181778

Flynn, C. P. (2001). Acknowledging the "zoological connection": A sociological analysis of animal cruelty. *Society and Animals*, *9*(1), 71–87. doi:10.1163/156853001300109008

Gerbasi, K. C. (2004). Gender and nonhuman animal cruelty convictions: Data from pet–abuse. com. *Society & Animals: Journal of Human–Animal Studies, 12*(4), 359–365. doi:10.1163/1568530043068029

Henry, B. C. (2004). The relationship between animal cruelty, delinquency, and attitudes toward the treatment of animals. *Society and Animals*, *12*(3), 185–207. doi:10.1163/1568530042880677

Hensley, C., & Tallichet, S. E. (2005). Learning to be cruel?: Exploring the onset and frequency of animal cruelty. *International Journal of Offender Therapy and Comparative Criminology*, *49*(1), 37–47. doi:10.1177/0306624x04266680

Hox, J. (2002). *Multilevel analysis: Techniques and applications*. Mahwah, NJ: Erlbaum.

The Humane Society. (2014). *Animal cruelty facts and statistics*. Retrieved from https://www.humanesociety.org/resources/animal–cruelty–facts–and–stats

Hutton, S. (1983). Duitse aríst eile. *Comhar, 42*(2), 27. doi:10.2307/20555078

Johnson, R. R. B., & Christensen, L. B. (2010). *Educational research: Quantitative, qualitative, and mixed approaches*. Thousand Oaks, CA: Sage.

Kogan, L. R., McConnell, S., Schoenfeld-Tacher, R., & Jansen-Lock, P. (2004). Crosstrails. *Violence Against Women, 10*(4), 418–434. doi:10.1177/1077801204263198

Kvale, S., & Brinkmann, S. (2009). *Interviews: Learning the craft of qualitative research interviewing*. Thousand Oaks, CA: Sage.

Lacroix, C. A. (1998). Another weapon for combating family violence: Prevention of animal abuse. *Animal Law*, *4*, 1–21. Retrieved from https://heinonline.org/HOL/LandingPage?handle=hein.journals/anim4&div=5&id=&page=

Linzey, A. (2009). *The link between animal abuse and human violence.* Sussex, UK: Sussex Academic Press.

Lockwood, R. (2006). *Animal cruelty prosecution: opportunities for early response to crime and interpersonal violence*. New York, NY: American Prosecutors Research Institute.

Lockwood, R. (2008). Counting cruelty: Challenges and opportunities in assessing animal abuse and neglect in America. In *The international handbook of animal abuse and cruelty: Theory, research, and application* (pp. 87–109). Hoboken, NJ: Wiley & Sons.

Merck, M. D. (2012). *Veterinary forensics: animal cruelty investigations*. Hoboken, NJ: Wiley & Sons.

Merz-Perez, L., & Heide, K. M. (2003). *Animal cruelty: Pathway to violence against people*. New York, NY: Rowman Altamira.

Munro, L. (2005). Strategies, action repertoires and DIY activism in the animal rights movement. *Social Movement Studies*, *4*(1), 75–94. doi:10.1080/14742830500051994

Moore, D. S., McCabe, G. P., & Craig, B. A. (2009). *Introduction to the practice of statistics*. New York, NY: W. H. Freeman.

Nathanson, J. N. (2009). Animal hoarding: slipping into the darkness of comorbid animal and self–neglect. *Journal of Elder Abuse & Neglect*, *21*(4), 307–324. doi:10.1080/08946560903004839

Patronek, G. J. (1999). Hoarding of animals: An under-recognized public health problem in a difficult-to-study population. *Public Health Reports*, *114*(1), 81–87. doi:10.1093/phr/114.1.81

Patterson, G. R., DeBaryshe, B. D., & Ramsey, E. (1989). A developmental perspective on anti–social behavior. *American Psychologist, 44*(3), 29–35. doi:10.1037//0003–066x.44.2.329

Pierpoint, H., & Maher, J. (2010). Animal abuse. In *Handbook on crime* (pp. 480–501). Thousand Oaks, CA: Sage.

Polkinghorne, D. E. (2005). Language and meaning: Data collection in qualitative research. *Journal of Counseling Psychology, 52*, 137–145. doi:10.1037/0022–0167.52.2.137

Punch, K. F. (2013). *Introduction to social research: Quantitative and qualitative approaches*. Thousand Oaks, CA: Sage.

Renzetti, C. (1992). *Violent betrayal: Partner abuse in lesbian relationships*. doi:10.4135/9781483325767

Risley-Curtiss, C., Holley, L. C., Cruickshank, T., Porcelli, J., Rhoads, C., Bacchus, D. N., . . . Murphy, S. B. (2006). "She was family" women of color and animal–human connections. *Affilia*, *21*(4), 433–447. doi:10.1177/0886109906292314

Robin, M., ten Bensel, R. W., Quigley, J., & Anderson, R. K. (1984). Abused children and their pets. In R. K. Anderson, B. L. Hart, & L. A. Hart (Eds.), *Pet connection: Its influence on our health and quality of life.* Minneapolis: Center to Study Human-Animal Relationships and Environments, University of Minnesota.

Schlueter, L. S. (2008). Law enforcement perspectives and obligations related to animal abuse. In *The international handbook of theory and research on animal abuse and cruelty* (pp. 375-391).

Silverman, D. (2010). *Qualitative research*. Thousand Oaks, CA: Sage.

Simmons, C. A., & Lehmann, P. (2007). Exploring the link between pet abuse and controlling behaviors in violent relationships. *Journal of Interpersonal Violence*, *22*(9), 1211–1222. doi:10.1177/0886260507303734

Tabachnick, B. G., & Fidell, L. S. (2012). *Using multivariate statistics*. Boston, MA: Pearson/Allyn & Bacon.

Tapia, F. (1971). Children who are cruel to animals. *Child Psychiatry and Human Development, 2,* 70–77. doi:10.1007/bf01434639

Thompson, K. L., & Gullone, E. (2003). Promotion of empathy and prosocial behaviour in children through humane education. *Australian Psychologist*, *38*(3), 175–182. doi:10.1080/00050060310001707187

Tiplady, C. M., Walsh, D. B., & Phillips, C. J. C. (2012). Intimate partner violence and companion animal welfare. *Australian Veterinary Journal*, *90*(1-2), 48–53. doi:10.1111/j.1751–0813.2011.00843.x

Vidović, V. V., & Bratko, D. (1999). Pet ownership, type of pet and socio–emotional development of school children. *Anthrozoos: A Multidisciplinary Journal of The Interactions of People & Animals*, *12*(4), 211–217. doi:10.2752/089279399787000129

Vollum, S., Buffington–Vollum, J., & Longmire, D. R. (2004). Moral disengagement and attitudes about violence toward animals. *Society and Animals*, *12*(3), 209–235. doi:10.1163/1568530042880668

Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993). *The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility.* Paper presented at the 9th Annual Conference of the ISTSS, San Antonio, CA.

Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1994). *The PTSD checklist–civilian version (PCL–C)*. Boston, MA: National Center for Post–Traumatic Stress Disorder.

Widom, C. S. (2000), Childhood victimization: Early adversity, later psychopathology. *National Institute of Justice Journal, 7,* 2–9. doi:10.1037/e510522006–001

Appendix A

Log of Activities

Appendix B
PTSD Checklist – Civilian Version

Instruction to patient: Below is a list of problems and complaints that veterans sometimes have in response to stressful life experiences. Please read each one carefully, put an "X" in the box to indicate how much you have been bothered by that problem *in the last month (5 point scale)*.

1. Repeated, disturbing *memories, thoughts, or images* of a stressful experience from the past?
2. Repeated, disturbing *dreams* of a stressful experience from the past?
3. Suddenly *acting* or *feeling* as if a stressful experience *were happening* again (as if you were reliving it)?
4. Feeling *very upset* when *something reminded* you of a stressful experience from the past?
5. Having *physical reactions* (e.g., heart pounding, trouble breathing, or sweating) when *something reminded* you of a stressful experience from the past?
6. Avoid *thinking about* or *talking about* a stressful experience from the past or avoid having feelings relayed to it?
7. Avoid *activities* or *situations* because they *remind you* of a stressful experience from the past?
8. Trouble *remembering important parts* of a stressful experience from the past?
9. Loss of *interest in things that you used to enjoy?*
10. Feeling *distant* or *cut* off from other people?
11. Feeling *emotionally numb* or being unable to have loving feelings for those close to you?
12. Feeling as if your *future* will somehow be *cut short*?
13. Trouble *falling* or *staying asleep*?
14. Feeling *irritable* or having *angry outbursts*?
15. Having *difficulty concentrating*?
16. Being *"super alert"* or watchful on guard?
17. Feeling *jumpy* or easily startled?

The PCL is a standardized self-report rating scale for PTSD comprising 17 items that correspond to the key symptoms of PTSD. Two versions of the PCL exist: 1) PCL-M is specific to PTSD caused by military experiences and 2) PCL-C is applied generally to any traumatic event.

The PCL can be easily modified to fit specific time frames or events. For example, instead of asking about "the past month," questions may ask about "the past week" or be modified to focus on events specific to a deployment.

How is the PCL completed?

The PCL is self-administered

Respondents indicate how much they have been bothered by a symptom over the past month using a 5-point (1–5) scale, circling their responses. Responses range from **1** *Not at All* – **5** *Extremely*

How is the PCL Scored?

1) Add up all items for a total severity score

or

2) Treat response categories **3–5** (*Moderately* or above) as symptomatic and responses **1–2** (below *Moderately*) as non-symptomatic, then use the following DSM criteria for a diagnosis:
- Symptomatic response to at least 1 "B" item (Questions 1–5),
- Symptomatic response to at least 3 "C" items (Questions 6–12), and
- Symptomatic response to at least 2 "D" items (Questions 13–17)

Are Results Valid and Reliable?

Two studies of both Vietnam and Persian Gulf theater veterans show that the PCL is both valid and reliable (Additional references are available from the DHCC)

What Additional Follow-up is Available?

All military health system beneficiaries with health concerns they believe are deployment-related are encouraged to seek medical care
Patients should be asked, **"Is your health concern today related to a deployment?"** during all primary care visits.

• If the patient replies "**yes**," the provider should follow the Post-Deployment Health Clinical Practice Guideline (PDH-CPG) and supporting guidelines available through the DHCC and www.PDHealth.mil

DHCC Clinicians Helpline: 1 (866) 559-1627 DSN: 662-6563 www.PDHealth.mil
PDH-CPG Tool Kit Pocket Cards Version 1.0 December 2003

Appendix C

Survey

1. What is your gender?

    a. Male
    b. Female

2. What is your age?

a. 18 – 25 years old
b. 26 – 35 years old
c. 36 – 45 years old
d. 46 – 55 years old
e. 55 years old and above

3. What is your race?

a. White
b. Black or African American
c. American Indian/Alaska Native
d. Asian
e. Pacific Islander
f. Others

4. What is your highest educational attainment?

a. High school graduate
b. Some college
c. Bachelor's degree
d. Associate degree
e. Postgraduate degree

5. What is your income level per month?

a. $5,000 and below
b. $5,001 – $10,000
c. $10,001 - $15,000
d. 16,001 - $20,000
e. $20,001 and above

6. Have you ever, at any time, owned pets?

    1. Yes…What kind of animal(s)?

_____

2. No

7. Do you currently own any pets?

1. Yes…What kind of animal(s)?

_____

2. No

8. Has a pet of yours ever been hurt or neglected?

1. Yes…What happened?

_____

_____

2. No

9. Was this accidental or deliberate?

1. Accidental

2. Deliberate

10. Have you ever been afraid or worried that something would happen to your pet?

1. Yes…Please explain:

_____

_____

2. No

11. Do you believe that you have been a witness of animal cruelty in your home?

1. Yes…Please explain:

_____

_____

2. No