How Do People in Animal Welfare Fields Respond to Family Violence Situations?

A Dissertation Presented for the

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Dedication

This dissertation is dedicated to my parents, Bobbie Lee Poe and George Poe, who offered their support and motivation in their own unique ways. Also, to Dr. John C. New; I wish you could have been here to see it, and I hope you would have been proud.

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Abstract

Cross-reporting refers to the idea that people working in human welfare and people in animal welfare fields who observe or have suspicions of abuse or neglect of children, domestic violence, elderly or disabled people, or animals, respectively, are obligated to report their observations to the appropriate agencies. This exploratory study investigates the types of maltreatment witnessed or observed while at work by people in animal related fields; what responses these workers are making to what they are seeing; and the factors influencing their responses. Using an open online survey, this study found that 21% to 29% of the participants indicated that at some point in the last 12 months they have found themselves in situations at work where they were concerned about the safety or well-being of a child, potential domestic violence, or about an elderly and/or disabled adult. For children and vulnerable adults, warning signs of neglect were the most common reason for concern, while something a partner said or threats most often prompted concerns about intimate partner violence. A lack of evidence, the severity of the situation, and agency/organizational policy were the most commonly cited influencing factors respondents reported across situations. Forty-eight percent of participants (n = 202) indicated that their organization has policies regarding making reports to other agencies such as law enforcement, child protective services, or adult protective services

While the current study has substantial limitations—including sample size, unrepresentativeness and the lack of generalizability of the sample, as well as selection and recall bias-- it provides a first glimpse of the state of cross-reporting from the perspective of people in animal related fields. Further research is needed that focuses on specific professions within animal welfare, captures a more nuanced picture of people's responses to maltreatment, and looks more closely at the impact of training and agency policy.

Table of Contents

Chapter 1: Introduction **1**

Background of Cross-reporting 1

Statement of the Problem 6

Purpose of the Study 7

Chapter 2: Review of the Related Literature **8**

Theoretical Framework of the Study 8

Family Dysfunction in Childhood and Animal Abuse 10

Tools to Measure Animal Abuse 10

Samples of Children 15

Samples of Parents and Children 26

Retrospective Studies with Adults 34

Animal Cruelty and Juvenile Antisocial Behavior 41

Non-lethal Antisocial Behaviors and Animal Cruelty 41

Bullying 44

Sexual Offenses and Bestiality 49

Fire-setting 53

Antisocial Behaviors with Lethal Intent and Animal Cruelty by Juveniles 54

Homicide 54

School Shootings 57

Childhood Animal Cruelty and Negative Experiences among Criminals 61

Inmates 61

Sex Offenders 67

Murderers 72

Intimate Partner Violence and Animal Abuse 74

Elder Abuse and Animal Abuse 85

Discussion of the Literature 88

Chapter 3: Methods **92**

Introduction and Research Hypotheses 92

Design 92

Instrument 93

Eligibility Questions 94

Individual Position 94

Organizational Information 94

Types of Maltreatment and Frequency 95

Response to Situations 97

Demographic Information 98

Sampling 98

Participants 98

Institutional Review, Informed Consent, Confidentiality and Anonymity 101

Survey Distribution 102

Data Analysis 103

Chapter 4: Results **104**

Sample Size and Demographics 104

Individual Position 105

Organizational Information 107

Prevalence of Concern 109

Child Maltreatment 109

Intimate Partner Violence 110

Elder/Vulnerable Adult Maltreatment 110

Reasons for Concern 111

Child Maltreatment 111

Intimate Partner Violence 111

Elder/Vulnerable Adult Maltreatment 112

Response, Reasoning, and Confidence 112

Child Maltreatment 113

Intimate Partner Violence 114

Elder/Vulnerable Adult Maltreatment 115

Hypothesis 1 116

Hypothesis 2 119

Hypothesis 3 122

Chapter 5: Discussion **125**

Overview of the Current Study Findings 125

Relevance of the Current Study within the Current Body of Knowledge 126

Strengths of the Current Study 129

Limitations of the Current Study 130

Recommendations for Future Research 134

Summary Conclusion 138

List of References **141**

Appendices **152**

Appendix 1. Figures 153

Appendix 2. Tables 159

Appendix 3. IRB Approval Letter. 169

Appendix 4. Informed Consent 170

Appendix 5. Recruitment Message 172

Appendix 6. Survey for People in Animal Related Fields 173

Vita **188**

List of Tables

Table 1. Education Level 159

Table 2. Marital Status 159

Table 3. Sample by State 160

Table 4. Individual Position 161

Table 5. Training Received 161

Table 6. Type of Organization 162

Table 7. Prevalence of Concern 162

Table 8. Reasons for Concern about Children 163

Table 9. Reasons for Concern about Domestic Violence 164

Table 10. Reasons for Concern about Vulnerable Adults 165

Table 11. Response to Child Maltreatment 166

Table 12. Response to Intimate Partner Violence 166

Table 13. Response to Elderly/Vulnerable Adult Maltreatment 166

Table 14. Reasoning for Response to Child Maltreatment 167

Table 15. Reasoning for Response to Intimate Partner Violence 167

Table 16. Reasoning for Response to Vulnerable Adult Maltreatment 168

Table 17. Encountered Multiple Types of Family Violence 168

List of Figures

Figure 1. The Interconnectedness of Abuse.....153

Figure 2. Employment of Animal Control Workers, by Area, May 2015.....154

Figure 3. Tennessee Certified Animal Control Agencies.....155

Figure 4. Sample by Sex.....156

Figure 5. Sample by Race.....156

Figure 6. Numbers of Employees & Volunteers.....157

Figure 7. Frequency of Concern.....157

Figure 8. Confidence in Responses by Situation.....152

List of Attachments

Summary of State Cross-Reporting Laws..... state table.pdf

Chapter 1: Introduction

Background of Cross-reporting

"About a hundred miles down the interstate, he opened the car door and ordered my daughter Christine to kick our dog Dusty out. When she refused, he told her he would do to Dusty what he did to Rocko, only he would do it right this time, and she could watch while he tortured and killed Dusty and dumped her off the side of the road, too. Then he said he would come home and kill me and Christine would be left alone with him. He raped Christine her first night alone in our new home while I was at work. She had just turned eight."

– Marsha Millikin: "Life and Death Inside the Cycles of Violence"

"'My neighbor's dog keeps crying. Please investigate,' the telephone voice pleads. Barbara Fabricant finds the dog shackled to a two-meter chain, standing in 65 centimeters of water, in heavy rain. 'My dog used to sleep with me,' an old woman wails. 'But my son moved in and won't let my dog in the house. He's doing this to torture me.'" Rosen (1995)

It is stories like these, in addition to a growing body of literature illustrating the correlations between the presence of family violence and animal abuse in the home that have lead many professionals to believe there is a need for communication between animal welfare and human welfare professionals, a concept known as cross-reporting. Cross-reporting refers to the idea that human welfare professionals and people in animal welfare fields who observe or have suspicions of abuse or neglect of children, elderly or disabled people, or animals, respectively, are obligated to report their observations to the appropriate agencies. Some states have gone so far as to pass different forms of cross-reporting legislation (Animal Law Coalition, 2009; Nolen, 2001; Arkow, 1999). As of April 2016, seven states--Connecticut, D.C., Illinois, Louisiana, Nebraska, Tennessee, and West Virginia—have laws that mandate child protective service workers, department of human services employees, and/or social workers to report animal abuse. Five states— California, Florida, Maine, Massachusetts, and Oregon—have permissive cross-reporting laws in which give the professionals the option of cross-reporting. Please see the attachment listed for a brief overview of the states with cross-reporting laws.

On paper, cross-reporting appears to be reasonable idea that most professionals would agree would be beneficial. Arkow (1999) cites many articles regarding the connections between child abuse and animal abuse as support for cross-reporting. However, Arkow (1999) also discusses several reasons why practitioners may be reluctant to cross report, including: a lack of adequate training to recognize other forms of abuse; a fear of breaching client confidentiality; the absence of cross-reporting standards; reluctance to involve another government agency; the inability to address existing priorities due to limited resources; or a desire to stay uninvolved as much as possible.

Long, Long, and Kulkarni (2007) also discuss the potential positive and negative aspects of mandatory cross-reporting of child and animal abuse. The authors state that cross-reporting has the potential of assisting child protective service (CPS) case managers by indicating types of abuse of which to be aware. An example given in the article is that if an animal control officer makes a report of concern regarding a father with small children and the animal control officer also reports that the father has been beating the family dog with a belt, then the CPS worker may be alerted to look for specific types of physical injuries on the children, belt marks in particular. Cross-reporting is also offered as a way for agencies to have current and a well-rounded picture of the violent acts that are occurring in a household which would enable the agencies to develop more effective intervention strategies. Legislation mandating cross-reporting could encourage collaboration between agencies and inter-organizational training.

Long, Long, and Kulkarni (2007) also identify potential negative consequences of mandatory cross-reporting. The first point the authors articulate is that at the present, there is little evidence that mandatory reporting reduces rates of abuse and neglect. Secondly, professionals may be concerned that cross-reporting may violate clients' confidentiality. There

is also the concern of family members making false allegations against one another, which can occur in volatile family situations. Lastly, there is the possibility that mandatory cross-reporting may divert funding from already money-strapped programs to the resources needed to handle additional reports. However, the authors conclude that the benefits of an effective cross-reporting system outweigh the potential negative consequences.

Montminy-Danna (2007) surveyed state child welfare professionals including family service workers, intake workers, and juvenile probation officers via a five question survey called the Initial Caseworker Survey about cases involving animal cruelty during the past year. Information gathered included the percentage of cases involving animal cruelty, protocol for documenting animal cruelty, and interest in participating in follow up interviews. Two focus groups made up of four child welfare workers, a training specialist, and an interviewer were held, in addition to four follow up interviews with participants who completed the survey.

Out of 500 surveys that were sent out, 121 were returned. Ten surveys were dropped from the analysis because they were found to be duplicates. Out of the 110 surveys analyzed, 22.5% indicated that they had cases that involved animal cruelty within the past year. Based upon qualitative analysis, it was determined that the cases involving animal cruelty did not come to the attention of child welfare services based upon the animal cruelty. Instead, animal cruelty was discovered after the worker began working with the family. A majority of the family service workers reported that they documented animal cruelty in their case files. While the article mentions that some child welfare workers reported removing the animals from the abusive setting, it does not mention whether the workers made reports to the animal control agency in the area about the abuse. According to the author, many case workers recommended that mandatory

training should be provided to child welfare workers, including methods of assessment and treatment, as well as available resources for both animal abusers and the animals.

While Montminy-Danna (2007) does not specifically address cross-reporting, the author does look at the child-welfare workers' side as it pertains to animal abuse. Sample size is a limitation of this study, as is the amount of information gathered by the survey tools. Additionally, self-selection bias may also be a potential problem as there may be differences between the state child welfare workers who responded and those who did not. However, this study does show that some child welfare workers are looking for and dealing with families in which animal abuse is present, and that more training may be useful to them in this area.

Risley-Curtiss, Zilney, and Hornung (2010) has been the only study thus far that has examined whether cross-reporting is occurring from the side of public child welfare agencies; animal welfare agencies were not addressed. In this study, employees responsible from training child protective service workers in 45 states and the District of Columbia answered a 23-item questionnaire either online via email or on the phone. The survey asked ten questions regarding logistics and demographics particularly related to training of CPS case manager. The remaining 13 questions addressed whether the CPS case manager training included information about the presence of animals in the home, being able to recognized and assess animal abuse, cross-reporting, the Link between human and animal violence, as well as the benefits of animal assisted interventions (p.74). The authors found that approximately 20% of the states include information in their trainings about assessing the relationships family members have with animals, and about 17% include information about recognizing and assessing animal abuse. A greater number, 37% included information about the Link between human and animal violence in their core training. However, the majority of states, over 75% do not include questions about

animal abuse in their safety and risk assessment protocols. Specifically addressing cross-reporting, 26% of the states related that some cross-reporting occurs, 6.5% indicated they had some sort of policy in place, and 11% include information about cross-reporting in their training (p.76). This study is an important first step in cross-reporting research as it is the first national study of its kind. However, how accurate the picture of cross-reporting the article provides is unknown. The sample in this study consisted of directors of training for CPS and staff members in charge of core or pre-service training. However, what happens in training is not necessarily what is happening in the field.

Zilney and Zilney (2005) was the first study to explore the practical application of cross-reporting. The authors set up a system in Wellington County, Ontario for 12 months in which Family and Children's Services (FCS) workers and Humane Society investigators each completed checklists when conducting investigations in order to examine connections between different types of violence. FCS workers had concerns regarding an animal in 20 percent of the total of 1,485 households. Forty-one percent of the 1,485 homes had no animals, fifty percent of the homes had at least one animal, and in the remaining nine percent of homes, the FCS worker did not visit the home and therefore did not determine if the home had animals. Humane society workers made 10 referrals for FCS out of 247 completed investigations. Forty-nine percent of the homes did not have children, 39% percent of the homes had at least one child, and in the remaining 12%, the humane society worker did not visit the home and so did not determine if there were children in the home. Zilney and Zilney (2005) found that the project increased interagency communication, and made both agencies aware of differences in policies and procedures. The humane society workers stated that they felt they needed more training in order to develop better skills for identifying child abuse. FCS workers reported numerous cases in

which they addressed animal maltreatment on their own, particularly if the child was being aggressive with an animal. However, the researchers found that some FCS workers did not see assessing for animal welfare as important and resisted the study, leading the researchers to suspect that some FCS workers may not have completed checklists accurately. Additionally, the researchers found that FCS workers who had supervisors who were minimally involved in the project were more likely to show resistance. The humane society investigators, however, continued to use the checklist after the study was completed.

Statement of the Problem

While the literature shows that, in general, child welfare professionals agree that cross-reporting is beneficial and there is some beginning research about child welfare professionals' experiences with animal abuse, there is a gap in the literature when it comes to people in animal welfare fields and their experiences with different types of family violence: elder abuse, domestic violence, and child abuse. Risley-Curtiss, Zilney, and Hornung (2010) shows us that a proportion of states are including information about the Link and cross-reporting when training child welfare case managers, but what about the people in animal welfare fields? Zilney and Zilney's (2005) results seem to imply that people in animal welfare fields may be more dedicated to cross-reporting, but currently, there is no literature showing that people in animal welfare fields are routinely looking for the signs of family violence while in the field, or that they know what to do if they do notice warning signs. What warning signs are they seeing that prompt their concern? How are they responding? Do they feel confident about the manner in which they respond to these situations? These are some of the questions the current study attempts to address.

The Purpose of the Study

The purpose of this study is to assess the state of cross-reporting of different types of family violence from the perspective of people in animal welfare fields. To accomplish this objective, this exploratory study addresses three major areas:

- The types of maltreatment witnessed or observed while out in the field;
- What responses workers are making to what they are seeing;
- The factors influencing their responses.

Chapter 2: Review of the Related Literature

The first section of this chapter outlines why one should expect to find family violence and animal abuse in the same households by presenting the theoretical perspective of the current study. After presenting the theoretical framework for the current study, a critical analysis of literature regarding children in dysfunctional families and animal abuse, domestic violence and animal abuse, as well as elder abuse and animal abuse is provided.

Theoretical Framework of the Study

The concept of the interconnectedness of animal abuse and violence towards people is commonly referred to as the Link between human and animal violence, or "the Link". It can be visualized as the overlapping of animal abuse with child maltreatment, domestic violence and elder abuse in a Venn diagram, as you can see in Appendix 1, Figure 1. While not a new idea— John Locke discussed the concept in his 1705 essay "Some Thoughts concerning Education" (Ascione and Arkow, eds, 1999)— the Link has only been an area of academic study since about the 1960s, and is currently a topic of interest in the fields of child development, criminology, sociology, social work, psychology, veterinary medicine and law (National Link Coalition, n.d) Now, instead of animal abuse as an isolated phenomenon, it is considered a "red flag" for other types of violence.

"No one theory or combination of variables predicts which individuals will commit violent acts or which interventions will prevent these acts initially or reduce the incidence of repeated offenses (Arkow, 1999, p.28)." Indeed, it is not the goal of the current study to explain why family violence and animal abuse are happening. Rather the theoretical framework of this study serves to provide a basis of understanding as to why it is reasonable to expect to find additional types of violence where one type of violence is known to be occurring; specifically, if

someone in the animal welfare field is seeing animal abuse, it is reasonable to suspect that he or she may also find different types of family violence happening in the home, which is the basis for the concept of cross-reporting, as discussed earlier in this paper.

The most useful theoretical framework to complete this task is ecological systems theory, first presented by Bronfenbrenner (1979) in the book *The Ecology of Human Development: Experiments by Nature and Design.* Bronfenbrenner (1979) describes ecological systems theory as the individual, the environment, and the interaction between the two. He goes on to describe the ecological environment as a set of "nested structures, like a set of Russian nesting dolls" (Bronfenbrenner, 1979, p. 3). Those "nested structures" to which Bronfenbrenner refers are more commonly known as systems, specifically the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem.

The microsystem refers to the person's immediate environment, and involves direct contact. The mesosytem refers to how multiple microsystems interact, such as peer relationships. Exosystems are larger institutions that a person may not interact with directly, but still have an influence upon the microsystem (for example, local government), while the macrosystem refers to the culture in which the mircrosystems, mesosystems, and exosystems are contained. Lastly, the chronosystem refers to environmental changes over time, both on the personal as well as in the broader historical perspective. These systems all interact and influence one another. To put these systems into context when it comes to the Link, Ascione's (1999) use of systems theory as a conceptual framework is a useful example. When looking at the Link on the level of the family, interactions between the micro-, meso-, and exo-system need to be explored; individual psychopathology (micro-), violence between family members (meso-) and neglected and dangerous communities (exo-) can all contribute to the overlap of different types of family

violence. The responses to violence in the smaller systems—responses of service providers, the court system, the media—can also influence the norms and attitudes of the community and the larger culture over time.

While Mead (1964) does not use the term "systems" specifically—Bronfenbrenner would not publish about ecological systems until almost 15 years later— she does introduce the concept of how the interactions between the individual, the family, and the greater culture influence one another, potentially leading to abuse of non-human and human animals. In his sociological analysis of animal cruelty, Flynn (2001) concludes that animal cruelty is a social phenomenon. Instead of viewing animal cruelty as a symptom of psychopathology in an individual, the author states that instead it is the result of individual characteristics, as well as socialization by family and peers, and overall cultural norms and attitudes, or what social workers might refer to as the person-in-environment, also known as ecological systems.

Over 60% of American households have companion animals (AVMA, 2012) and a majority of pet owners describe their animals as family members; it would be remiss to not consider the role the animals have in the clients' systems and the information their situations can provide. In the following literature, concrete examples of how different types of violence occur are analyzed.

Family Dysfunction in Childhood and Animal Abuse

Tools to Measure Animal Abuse

Animal abuse in general, and during childhood in particular, has been measured using a variety of instruments. Before delving into the literature, this section will discuss instruments that have been most frequently used to assess animal abuse and appear multiple times throughout

the body of literature discussed in this paper. Instruments that are unique to particular studies will be discussed within the context of the individual studies.

One of the most common instruments used to assess for childhood animal abuse in the reviewed body of literature is the Child Behavior Checklist (CBCL). The CBCL is a caretaker completed questionnaire that assesses child behavior on eight different scales. The CBCL contains one item which asks if the child has been cruel to animals within the past six months as a part of assessing for aggressive behaviors. The participant indicates an answer on a 3 point scale ranging from "not true" to "often true". While this tool is often used to assess for childhood animal abuse, and has face validity to do so, there are several limitations of the instrument in this area. First, the CBCL is completed by the parent or guardian of the child. Animal abuse is typically an activity done in secret, so it is likely that the parent or guardian may not know about his/her child's abusive acts toward animals, leading to under-reporting. Secondly, no definition of "animal abuse" is provided, leaving the parent or guardian to decide for him or herself what is abusive, which again can lead to underreporting. Lastly, using the CBCL to assess for animal abuse does not distinguish what type of animal, the type of abuse, frequency or severity of the animal abuse.

The Boat Inventory on Animal Related Experiences (BIARE), also known as the Boat Inventory, is another commonly used instrument to assess for animal cruelty. The BIARE is a structured interview format that can be used with adults or children, designed to explore people's relationships to and with animals. Topics covered by the BIARE include: animal ownership; experiencing animals as source of support; animal loss; cruelty to animals; killing animals; using animals to control or coerce a person; sexual interactions with animals; and animal related fears (Boat, 1995). Many researchers modify the BIARE by only using the questions that pertain to

animal cruelty, and often the questions regarding sexual acts with animals are omitted. Compared to the CBCL, the BIARE provides more detailed information about what the child's acts have been and how he/she felt about it. Additionally, this structured interview is designed to obtain information directly from the child instead of the parent. While social desirability is always a concern in any self-report research, by interviewing the child directly there is at least the possibility of gaining complete information, which is not present when interviewing a parent that may not have complete information about his/her child's activities. Because of the interview format of the BIARE, no norms for scoring have been established, meaning that there is not an objective method for using this instrument to compare the severity of animal abuse between children.

A newer scale developed by Baldry (2004) is the Physical and Emotional Tormenting Against Animals Scale, also known as the PET scale. The aim of the PET scale is to collect the same type of information as the BIARE, but in a short, close-ended, self-administered format that can be used outside of clinical settings.

To test the PET scale, a sample of 1356 children between the ages of 11 and 17 from 20 middle and high schools from the city and province of Rome, Italy was surveyed. The sample consisted of 45.5% girls and 54.5% boys, and the mean age of the sample was 14.1 years old.

The PET scale consists of four items regarding witnessing animal abuse, or indirect abuse, and five items to measure direct animal abuse which includes bothering, tormenting, hitting, harming, or being cruel to an animal. Response choices are in the form of a 5 point Likert scale ranging from 1 = never to 5 = very often. Two screening questions about pet ownership and type of animals were also included. Additionally, item 15 from the CBCL, which as previously mentioned asks whether the child has been cruel to animals in the past six months, was included

in the questionnaire so that correlations between the PET items and the CBCL item could be obtained.

The internal consistency for the direct abuse subscale was found to be good with Cronbach's alpha = .84. For the indirect scale the internal consistency was weaker with Cronbach's alpha = .69. Each of the items on the PET scale was correlated to some degree with item 15 from the CBCL. The direct abuse subscale was significantly correlated with the CBCL item, as were the individual items except for the item "hitting animals". The items on the indirect subscale were not significantly correlated to item 15 from the CBCL, lending discriminate validity to this scale because the indirect abuse subscale assesses for witnessing animal abuse while the item from the CBCL states "I am cruel to animals".

The Children and Animals Inventory (CAI) includes parent and child self-report forms based upon the semi-structured interview for children, the Children and Animals Assessment Instrument (Ascione, Thompson, & Black, 1997). Nine different dimensions of animal cruelty: severity, frequency, duration, how recent, diversity across and within categories of animals, sentience, covertness, isolation, and empathy are assessed, using Likert scales. Possible total scores range from 0, meaning no acts of animal cruelty, to 39 meaning severe, chronic, and recent acts of animal cruelty across a wide variety of animals and that the child shows no empathy.

In Dadds, Whiting, Bunn, Fraser, Charlson, and Pirola-Merlo (2004)'s preliminary test of the CAI, 36 parent-child pairs were recruited on a voluntary basis from Griffith University via classes or acquaintance with the research team. All of the participants were White and middle class, with the children ranging in age from 6-to-13 years of age. High internal consistency of the CAI was on both the parent (.88) and child (.96) versions. One week test-retest reliability

correlations were also high, with the parent version r =.80, p <.01 and the child version r = .75, p<.01 indicating that the participants answer similarly over time. While these results indicate that the CAI could be a valid and reliable measure of childhood animal cruelty, the distribution was highly skewed with a majority of the participants scoring a 0. The authors indicate that this skewness may have artificially inflated the correlations in this study. Therefore, a second study with a larger sample, which would allow for different statistical techniques, was conducted.

The second study consisted of 330 children aged 6-to-13 and their parents from five independent schools in Queensland, Australia. Like in the preliminary study, the participants were Caucasian and of average socioeconomic status. Return rates ranged from 30.5 % to 78.8% by school. To prevent bias from the return rates, the participants were compared to the larger population from which they were drawn, and the sample was found to match education district population data for parental education, income, and ethic status. Return rates were not predictive of any demographic differences of the sample, means, standard deviations, and ranges on the CAI between schools.

Rasch scaling was used to evaluate the psychometric properties of the CAI due to the skewed nature of the distribution (animal cruelty being rare in nonclinical populations), making correlations and Cronbach's alpha inappropriate due to the violated assumption of a normal distribution. The data were analyzed using the Rasch Unidimensional Measurement Model (RUMM). The appropriateness of the model was determined by the item-trait test of fit, average fit of persons across items, and the average fit of items across persons.

For the parent form, the measurement model was supported by the item-trait interaction test (Chi-square = 20.94, df = 12 p < .05), the mean (-0.07) and standard deviation (1.07) of the person-fit statistic, as well as the mean and standard deviation of the item-fit statistic, 0.22 and

1.99 respectively. The index of person separation value was .90, indicating that only 10% of the variance was due to error. Similar results were found for the child form item-trait interaction (Chi-square = 41.08, df = 12, p<.001), the person-fit statistic (M = -0.17, SD = .98), the item fit statistic (M = 0.02, SD = 2.02), and the index of person separation also had a value of .90, indicating that the measure is reliable.

A high rate of agreement was found between the parent and child reports of cruelty, with r = .66 for girls, and r = .42 for boys. Correlations decreased slightly when the reports indicating no animal abuse were removed from the analysis, (girls r =.43, boys r = .32), showing that the parent and child reports agree not just on occurrence, but also on the level of animal cruelty. There was no significant difference in agreement to the parents report based on the gender of the child. While this instrument needs further testing with more diverse populations of children and parents, the results thus far show good internal consistency and agreement between the parent and child reports.

Samples of Children

Family violence has been one of the most explored areas of the link between human and animal violence, as well as how family violence influences childhood animal cruelty. Tapia (1971) was one of the first studies of children who abuse animals. Tapia (1971) reviewed the files of 18 children, ages 9 to 15, in the Child Psychiatry Section of the University of Missouri School of Medicine for whom the main reported concern or one of the main concerns was animal abuse. All of the children in question were boys and they all displayed other aggressive behaviors, such as destructiveness, bullying, fighting, stealing, and fire setting. While there was a range of environmental and bio-psychosocial factors that were identified as contributing to the boys' violent behaviors, the most common factor was having violent parents, particularly

fathers. This very small study is limited by its sample size, the use of case files for data collection, and the lack of statistical analysis. In a follow up study, Rigdon and Tapia (1977) were able to find 13 of the original 18 participants. Of the thirteen, eight of the children continued to abuse animals two-to-nine years after the original evaluations. The authors found that while the type and extent of treatment varied, a change in the home environment was the most effective intervention.

Baldry (2003) surveyed 1,396 students, ages 9 to 17, from 13 randomly selected schools in the province and city of Rome, Italy about their experiences with domestic violence and animal abuse. Three students were excluded from the study because of the death of a parent.

Students completed the Physical and Emotional Tormenting Against Animals Scale (P.E.T) for preadolescents and adolescents, which measures exposure to animal abuse as well as committing animal abuse using five point Likert scales ranging from 1 (never) to 5 (always). Exposure to domestic violence—verbal, physical, and threatening--was measured with a modified version of the Conflict Tactic Scale (Straus, 1979). More extreme forms of domestic violence—threatening with a gun, killing, and sexual violence—were omitted from the scale. Participants also were asked to indicate using the same five point Likert scale whether their mothers or fathers had ever physically hurt them.

Forty children (2.9%) left most of the questions regarding domestic violence and direct abuse blank, and therefore were excluded from the study and referred to the school social worker or psychologist. Mandatory reports to child welfare services were made in three cases due to suspicions of abuse.

Exposure to animal abuse and exposure to domestic violence were converted into dichotomous variables. Slightly over half of the students (50.8%) reported committing at least

one type of animal abuse, with 66.5% of animal abusers being boys and 33.5% being girls (Chi-square = 86.19, df = 1, $p < .001$). Approximately half of the students (46.8%) reported that their parents had been violent to each other at least once, but that percentage decreased to 19.4% when referring to more severe forms of violence. Children who reported committing at least one type of animal cruelty were more likely have been exposed to domestic violence than children who did not report being cruel to animals.

Baldry (2003) found a much higher rate of animal abuse than in other studies, such as Flynn (1999). According to Baldry (2003), this difference is likely due to the choice of measurement tool for animal abuse. The PET Scale, which was used in this study, includes tormenting and bothering animals as forms of animal abuse, while other scales only include more severe forms of abuse. Social desirability bias, or the tendency of respondents to answer in ways that will be viewed favorably by others resulting in over-reporting of good behavior and under-reporting of negative behavior, is a potential limitation of this study. While the students were assured of confidentiality, they still may have not felt comfortable revealing information about such sensitive and potentially taboo subjects. Another limitation is that child abuse was only assessed with two items. The author encourages further research about the relationships between childhood animal abuse and other antisocial behaviors.

Duncan, Thomas, and Miller (2005) developed two comparison groups based upon committing animal cruelty or not using files of boys who received residential treatment at an institution in the Pacific Northwest between 1992 and 2002. These boys all had disruptive behavior problems, some type of criminal history, and met the criteria for conduct disorder or oppositional defiant disorder. Boys with histories of psychosis, neurological injuries or disorders, and IQs lower than 69 were excluded. Fifty boys who met criteria were identified as having a

history of animal abuse, and 43 of those files had detailed descriptions of the events. A random sample of 50 boys who had not committed acts of animal cruelty and met criteria were selected as the control group. The age range, 8 to 17, was equivalent for both groups, as was racial identity.

Chart reviewers recorded information about histories of physical child abuse, sexual child abuse, paternal alcoholism, paternal unavailability, and domestic violence on a code sheet developed for this study. One evaluated all 289 charts, while a second evaluator who was blind to the study hypotheses reviewed a random sample of twenty percent of the charts (n = 58) to establish inter-rater reliability. Inter-rater reliability revealed 98% agreement on group membership ($\kappa = .76$), 86% on physical child abuse ($\kappa = .65$), 81% on sexual child abuse ($\kappa = .59$), 84% agreement on parental alcoholism ($\kappa = .36$), 83% agreement on parental unavailability ($\kappa = .57$), and 88% on domestic violence ($\kappa = .73$).

Directional hypotheses were tested using Fisher's exact test because of the prediction that children with animal abuse histories would have greater family risk factors than children without animal abuse histories. The authors found that children who had a history of cruelty to animals had significantly greater histories of physical child abuse ($p = .036$), sexual child abuse ($p = .048$), and exposure to domestic violence ($p = .050$). No significant relationship was found between a history of being cruel to animals and parental alcoholism or parental unavailability, unlike Felthous (1980) who did find significant relationships between these variables. Using risk difference (RD), relative risk (RR), and odds ratio (OR) effect size computations, the authors found that children with a history of cruelty to animals were 2 to 2.5 times more likely to have been physically abused, sexually abused, and/or exposed to domestic violence than those children who did not.

Because this study utilized chart review to collect data, some limitations are present. First, while within acceptable ranges, inter-rater reliability values on some variables were low Secondly, the data that could be collected is contingent upon the accuracy and completeness of the information within the chart. Lastly, according to the authors, parental alcoholism and parental unavailability were difficult to operationally define and therefore coding depended mostly on clinical judgment, which could account for the lack of significant findings.

Dadds, Whiting, and Hawes (2006) explored the relationship between cruelty to animals, psychopathic traits, and family conflict during childhood. The authors recruited 67 boys and 64 girls between the ages of 6 and 13 and their parents from five independent schools in Queensland, Australia to participate in their study. Each family was provided with an information and consent sheet, the measurement tools, a return envelope, and a raffle ticket to enter a prize drawing. The return rate ranged from 30.5% to 79.2% across schools, but was not associated with the variables of interest.

To measure animal cruelty, the Children and Animals Inventory (CAI) was used. As mentioned in the measurement section, this instrument includes parent and child self-report forms regarding nine different dimensions of animal cruelty including severity, frequency, recency, duration, diversity across and within animal types, animal sentience, covertness, isolation, and empathy. Possible total scores range from 0, meaning no acts of animal cruelty, to 39 meaning severe, chronic, and recent acts of animal cruelty across a wide variety of animals and that the child shows no empathy.

The 33 item externalizing scale of the Child Behavior Checklist-Revise-Parent Form was used to measure the children's externalizing behaviors.

To assess for callous or unemotional (CU), or psychopathological, traits the Antisocial Process Screening Device was used. The primary caregiver completed the 20-item scale, answering each item regarding the child's behavior with a 0 (not at all true), 1 (sometimes true), or 2 (definitely true). The alpha reliability coefficient, which is a reliability estimate of an instrument, for this sample was .70 which is considered acceptable.

The 9 item, true-false response, conflict subscale of the Family Environment Scale was used to assess family conflict. This subscale is reported to have acceptable internal consistency, with Cronbach's alpha = .75, and 2 month test-retest reliability (.85), and 12 month test-retest reliability (.76).

The authors found that children self-reported higher levels of animal cruelty than their parents reported, and that males reported higher levels of animal cruelty than females. For each gender, two regressions were conducted—one with the parent report score, and one using the child's self-report score. The predictors in each model for each level of the regression were: 1. number of pets and the child's age, 2. family characteristics such as parental education and conflict, 3. externalizing and CU traits, and 4. CU traits x externalizing behavior. The authors decided to analyze the data with both linear regression and logistic regression, in which animal cruelty was coded into a dichotomous variable, because the distribution for animal cruelty is skewed (only about 30% scored higher than 0).

Using the linear regression with parents' reports for boys, the authors found that mothers with lower levels of education and with boys exhibiting higher levels of externalizing behaviors were more likely to be reported as cruel to animals. Based upon the linear regression with parents' reports for girls, girls who had fathers with lower education levels and higher levels of CU traits were more likely to be reported as cruel to animals. Using the children's self-reports,

however, mothers' education and the externalizing behavior and CU trait interaction were the significant predictors of animal cruelty for boys, and only higher level of CU traits were significant predictors of animal cruelty for girls.

The logistic regression, in which animal cruelty was re-coded from a continuous to a dichotomous yes/no variable, found that all of the independent predictors were significant for boys based upon the parents' reports, meaning that older males whose mothers had low education levels, exhibited high levels of externalizing behaviors and CU traits were more likely to be cruel to animals. For girls, age, the number of pets, and CU traits indicated a greater likelihood of animal cruelty. When using the logistic regression and the children's self-reports, only CU traits were found to be a significant predictor of animal cruelty for boys and girls. The results of this study indicate that temperamental characteristics of the child are associated with animal cruelty behaviors to a greater extent than family conflict. The authors state that based upon this study it appears that family conflict is more particularly associated with behavior problems in general, but does not have a specific relationship with animal cruelty. They argue that these results may be due to the use of a middle-class, community sample in which the population variance is greater in both animal cruelty and the predictor variables. The authors also indicate that the measure of family conflict may have been inadequate to measure family dysfunction and violence as it was hypothesized. The authors recommend that animal cruelty be viewed as a potential early-indicator that a child is at risk for on-going problems, including psychopathology.

McClellan, Adams, Douglas, McCurry, and Storck (1995) reviewed the records of 499 seriously mentally ill 5-to-18-year-olds who were hospitalized at a psychiatric facility in Washington between 1987 and 1992. Information regarding diagnoses; developmental history;

medical history; academic and intellectual test scores; family income, intactness, stability, and separation; family history of psychiatric disorders, substance abuse, and antisocial behaviors; a symptom checklist of 42 behavioral, emotional, interpersonal, and substance abuse; history of sexual and physical abuse and neglect; and history of sexually inappropriate behaviors were reviewed. Sexual abuse was coded based upon frequency from 1 to 4, and was only coded if incidents were confirmed by police or child protective services. Cross validation of assessments was performed across authors, and kappa scores ranged from 0.3 to 1.0. Six variables were excluded due to low kappa scores: history of antidepressant medication therapy, and 5 items from the symptom checklist.

Overall, the sample was mostly male and tended to have chaotic family and social backgrounds. Fifty-five percent of the sample had a history of sexual abuse. A majority of the participants with a history of sexual abuse were females who came from low socioeconomic status backgrounds, and had significantly higher rates of family disruption and out-of-home placements. Participants with histories of severe sexual abuse also had the highest rates of physical abuse, chronic physical abuse, and neglect.

Animal cruelty was found to be one of the symptoms related to a history of sexual abuse (Wald = 8.13, p = .004). Some of the other significant symptoms related to sexual abuse included hypersexual behaviors, phobic symptoms, public exposure/masturbation, substance abuse, dissociative symptoms, self-abusive behaviors, and suicidal ideation.

Like other studies in this research area, McClellan, Adams, Douglas, McCurry, & Storck (1995) is limited by the retrospective nature of the inquiry. As a chart review, the data are limited by the accuracy and quality of documentation. An additional limitation is the lack of standardized measures, although standard definitions were utilized. The large sample size (n =

499) is a strength of this study, but generalizability is limited because of the use of a convenience sample of children and adolescents admitted to one hospital. However, the authors argue that the comparison of sexually abused and non-sexually abused severely mentally ill youth is beneficial. Since this study was not specifically looking at the relationship between animal cruelty and a history of sexual abuse, the significant finding between the two variables is compelling.

Ascione, Friedrich, Heath, and Hayashi (2003) compared cruelty to animals across normative, sexually abused, and outpatient psychiatric groups of 6 to 12 year olds. The normative group consisted of 540 children drawn from pediatric and medical clinics in Rochester, Minnesota, and from daycare centers in Los Angeles, California. The 481 sexually abused children were selected from 13 US, Canadian, and European clinics. For a majority of the children, the latest sexual abuse incident had occurred within the past year, and for all of the children in this group sexual abuse had been confirmed by social services or a child protection agency, and the perpetrator was someone other than the child's mother/ female caretaker. The psychiatric outpatient group consisted of 412 children from six clinics in the US and one clinic in Germany.

For each group, the mother or female caretaker completed the behavioral problems section of the 4 to 18 year old version of the Child Behavior Checklist (Achenbach, 1991) and the Child Sexual Behavior Inventory (CSBI), which is a 38 item instrument used to measure a variety of sexual and sexualized behaviors (Friedrich, 1997).. To assess for physical abuse, caregivers were asked "Has your child been physically abused?" The children's exposure to domestic violence was assessed "Have your child's parents hit, slapped or shoved each other?" Children who were considered cruel to animals were children given a 1 (Somewhat or

Sometimes True) or a 2 (Very True or Often True) on item 15 of the CBCL, which is “cruel to animals”.

Cruelty to animals was reported for 3.1% of the normative group, 17.9% of the sexually abused group, and 15.6% of the outpatient psychiatric group. Physical abuse was reported for 0.2% of the normative group, 36.4% of the sexually abused group, and 11.7% of the outpatient psychiatric group. Domestic violence was reported for 5.9% of the normative group, 35.7% of the sexually abused group, and 18.5% of the outpatient psychiatric group. Do to the low rate of animal cruelty and physical abuse in the normative group, the authors did not do any further analysis with this group.

In the sexually abused group when neither physical abuse nor domestic violence was present, the overall rate for animal cruelty was higher for boys (approximately 25% vs. 6.1%). For the sexually abused boys, physical abuse was associated with a higher rate of animal cruelty (36%), although exposure to domestic violence did not create a significant increase (36.8%). For sexually abused girls, however, the rate of animal cruelty increased when either physical abuse (17.1%) or domestic violence (20%) was present, and was highest when both were reported (29.4%).

Like the sexually abused group, boys had a higher rate of animal cruelty than girls in the outpatient psychiatric group when physical abuse and domestic violence are not present (15% vs. 10.7%). In this group, the rate of animal cruelty for boys when physical abuse was somewhat higher when physical abuse was present (25.6%), but similar when only domestic violence was present (12.1%). When both physical abuse and domestic violence were present, the rate of animal cruelty for boys in this group jumped to 60%. For girls in the psychiatric outpatient group, physical abuse alone increased the rate of animal cruelty (16.7%), but there were no

reports of animal cruelty where only domestic violence was present or in cases where physical abuse and domestic violence were present.

Using Pearson's correlations, animal cruelty was significantly correlated to being cruel to other people as assessed on the CBCL ($r = .42$, $p<.001$) and touching animals' sex parts ($r = 0.12$, $p < .001$), and cruelty to other people and touching animal sex parts were significantly correlated ($r = 0.12$, $p < .001$) across the entire sample. When analyzed by group, animal cruelty was found to be correlated to touching animal sex parts only for the sexually abused group ($r = 0.19$, $p <.001$). Cruelty to other people and animal cruelty were significant for both the sexually abused group ($r = 0.42$, $p <.001$) and the outpatient psychiatric group ($r = 0.38$, $p<.001$). The authors conclude that there appear to be relationships between physical abuse, domestic violence, and cruelty to animals, but sexualized forms of animal cruelty during childhood are more specifically related to having a history of sexual abuse, which is similar to the findings of McClellan, Adams, Douglas, McCurry, & Storck (1995).

This study has the advantage of using a much larger sample size than most studies in this area of research, and that the participants came from a variety of locations including Europe and Canada. However, the data set is limited because it came from a single source, the child's primary female caregiver which can result in under-reporting of behaviors. While the authors did not analyze the sample by age group, it is possible that there are significant differences in the caretakers' knowledge of their child's behavior between younger and older children as older children may be more independent and are able to do things without their caretaker's knowledge. Additionally, the CBCL only says "cruel to animals", leaving the interpretation of that open to the participant completing the instrument, which again could lead to under-reporting. Pet ownership was not assessed, and the presence of animal cruelty may have been influenced by

access to animals. There was no assessment of the temporal relationship between animal cruelty and the other variables, so it is not possible to say that one is the result of the other. Lastly, the presence of physical abuse and domestic violence was determined by only one question. In future research, multiple sources of data collection and more precise measurement instruments would be beneficial.

Samples of Parents and Children

Currie (2006) recruited mothers with two school age children, ages 5 to 17, in a city in central Canada in her study of animal cruelty in children exposed to male-to-female domestic violence. To participate, families had to call a phone number to be screened. In addition to having two children exposed to domestic violence, the mother must also have received domestic violence counseling. A total of 47 mothers with 94 children were recruited for the *exposed to domestic violence* group, and a matched control group of 45 mothers with 90 children were also recruited, and the data were collected between September 1996 and February 2000.

The mothers completed the Child Behavior Checklist (CBCL) for their children, and demographic information was collected in an interview format. Currie (2006) found that children exposed to domestic violence were significantly more likely to engage in animal cruelty than non-exposed children (17% vs. 7%, 95% CI = 1.10-7.92; p = .03). Mother's hospitalization due to domestic violence, female-to-male domestic violence, and the overall mean exposure to domestic violence were not significant factors for animal cruelty. No significant differences were found in age between children who were not cruel to animals in the exposed to domestic violence and not exposed groups. However, children who were cruel to animals were significantly older in the exposed to domestic violence group than children who were cruel to

animals who were not exposed to domestic violence. Unlike other studies in this area, gender was not found to be significantly related to committing animal cruelty.

Sample size is a limitation of this study since each group had less than fifty families because small sample size decreases statistical power which can obscure relationships that may actually be present. By using sibling pairs in the groups, the authors violated the statistical assumption of independence of observations, which may have influenced the results.

Like all studies that use the CBCL to assess childhood animal cruelty, Currie (2006) is limited in that "animal cruelty" is left open to the interpretation of the respondent, is limited to one item on the instrument, and the respondents, mothers in this study, may not be aware of all of their children's activities. Therefore, the use of the CBCL may result in under-identification of children who abuse animals and again obscure relationships that may be present. Child abuse was not assessed in this study, which is a variable that may have influence on whether a child abuses animals. However, aside from not finding gender to be significantly related to animal abuse, the results of this study are consistent with others in this area of research.

McEwen, Moffitt, and Arseneault (2013) took a slightly different approach; instead of investigating whether children who have been abused go on to abuse animals, the authors investigated whether childhood cruelty to animals was a marker for physical maltreatment. They also sought to discover whether the positive predictive value of animal cruelty and child maltreatment would vary based on age, persistence of the cruel behavior, and family socioeconomic disadvantage (p. 534). A sample of 1,116 families with five year old twins in England and Wales were selected from participants in the Environmental Risk Longitudinal Twin Study. The families participated in home assessment studies when the children were 5

years old with follow up in-home visits when the children were aged 7 years, 10 years, and 12 years.

Like Currie (2006), childhood animal cruelty was assessed using the Child Behavior Checklist. Child physical maltreatment was assessed using a standardized clinical interview protocol, after which two clinical psychologists reviewed each child's cumulative report and determined if maltreatment had occurred by the age of 12. Domestic violence between adults was assessed using the Conflict Tactics Scale and three additional items. The mothers were asked about their violence towards a partner as well as partner violence toward the mothers. Lastly, the authors assessed socioeconomic disadvantage when the children were 5 years old. Socioeconomic disadvantage was defined as meeting two or more of the following criteria:

> (a) head of household has no educational qualifications (b) head of household is employed in an unskilled occupation or is not in the labor force;(c)total household gross annual income is less than £10,000; (d) family receives at least one government benefit, excluding disability benefit; (e) family housing is government subsidized; (f) family has no access to a vehicle; and (g) family lives in the poorest of six neighborhood categories, in an area dominated by government subsidized housing, low incomes, high unemployment, and single-parent families. (p.535)

Based on those criteria, 39.7% of the sample qualified as socioeconomically disadvantaged.

The authors found that only a small percentage of the children were reported as being cruel to animals, and that the percentage declined as the children got older. Overall, 204 children, 9.1% of the sample, were included in the group *cruel to animals.* The authors found that 43.6% of the children in the *cruel to animals* had been maltreated, compared to only 18.9% of children who were not cruel to animals (OR = 3.32, 95% CI [2.36,4.68] p <.001). The authors

also explored the reverse by selecting children who had been maltreated and then looking at the proportion that were also cruel to animals. They found that children who had been maltreated by the age of 12 (n =472, 21.1%) had an elevated rate of cruelty to animals, 18.9% compared to 6.5% of non-maltreated children. It is interesting to note that the relationship is not symmetrical. While the authors found that about 1 out of 5 children who had been maltreated also abused animals, nearly 50% of children who were cruel to animals were also maltreated (p.537).

The authors found that 27.1% of the children who abused animals had been maltreated and exposed to adult domestic violence; 16.1% had experienced maltreatment only; 14.6% were exposed to domestic violence only; and 42.2% of the children experienced neither maltreatment nor domestic violence. The authors conducted a logistic regression model with cruelty to animals as the outcome variable and gender, child maltreatment, domestic violence and socioeconomic disadvantage as predictor variables. They found that the overall model was significant, and that child maltreatment was significantly associated with cruelty to animals, as was gender while domestic violence and socioeconomic disadvantage were not significantly associated with cruelty to animals.

McEwen, et al (2013) relies on the accuracy of the mothers' reports not only regarding the children's abuse of animals, but also child maltreatment and exposure to domestic violence. As previously discussed, the Child Behavior Checklist is extremely limited in assessing childhood animal cruelty, and as children grow older they are more able to hide their activities from caretakers, which may account for the authors' findings that animal cruelty decreased as the children aged. However, this study does have the advantage of a relatively large beginning sample.

Domestic violence shelters provide another way of collecting data about domestic violence and childhood exposure to and perpetration of animal abuse. Ascione, Weber, and Wood (1997) conducted a national survey of domestic violence shelters across the United States to determine whether women coming into shelters were expressing that their abusers were also abusive toward the family pet(s). The shelters surveyed were selected from the National Directory of Domestic Violence Programs compiled by the National Coalition against Domestic Violence (1994). One shelter from each state, excluding Utah and the District of Columbia, was selected based upon the shelter's capacity, whether children's counseling or programs were available, and whether the shelter provided overnight accommodations. Each shelter was sent a one-page, seven-item questionnaire with space for open-ended comments. Questions pertained to the number of women and children served between November 1, 1995, to May 1, 1996, and the co-occurrence of domestic violence and animal abuse. The response rate was 96%, with 48 out of 50 shelters responding.

In response to the question "Do children who come into your shelter talk about incidents of pet abuse?" 63% of 46 shelters responded in the affirmative. While this is a small sample of domestic violence shelters in the United States, this is a clear indication that many children living in violent homes are also witnessing animal abuse.

Thirty-eight women in a domestic violence shelter in northern Utah were interviewed by shelter staff about their experiences with animal abuse (Ascione, 1998). Fifty-eight percent of these women had children (n=22), ranging in age from 8 months to 20 years. A shortened version of the Battered Partner Shelter Survey-Pet Maltreatment Assessment (Ascione & Weber, 1995) was used. The BPSS consisted of seven open ended questions about the women's pet ownership;

if their partners had ever threatened, harmed, or killed a pet; and if their child(ren) have hurt or killed a pet.

Seventy-one percent of the women who had pets reported that their abuser had threatened to or actually had harmed the family pet(s). Actual harm or killing of the pet(s) was present in 57% of the cases. Seven of the women who had children (n = 22) reported that their children had hurt or killed a pet or pets, and included behaviors of sitting on a kitten, forcibly throwing a kitten against a wall, cutting a dog's tail, pulling a kitten's head out of the socket, and sodomizing a cat.

The first limitation of this research is that it applies only to women and their children who sought shelter in a facility from domestic violence. Therefore, we do not know if the same results would occur in a sample of women and children who either left a domestic violence situation to live with family and friends, which would indicate a social support network, or victims still in domestic violence situations. A very small sample from only one domestic violence shelter limits our knowledge because the results may not be reflective of all domestic violence victims. Due to the exploratory nature of the study, meaning that it only describes the events that occurred, no statistical analysis or comparisons were made. Lastly, the questions in the BPSS are limited to pets. It is possible these children could have been harming wild or stray animals, which is not covered in this assessment.

Ascione, Weber, Thompson, Heath, Maruyama, and Hayashi (2007) conducted a more rigorous study of battered women's experiences with animal abuse. Women in five different Utah domestic violence shelters were recruited to participate and a sample of 101 women was obtained. Children between the ages of 5 and 17 also were interviewed if the mother and child consented. A convenience sample of 120 women who reported no experience with domestic

violence from the community was recruited as a control sample. The domestic violence shelters and the women in both samples received financial compensation for participating, while children who participated were given coupons to local restaurants.

Women in the domestic violence group completed the Conflict Tactics Scale, once to describe their partners' actions towards them, and again to describe their actions against their partners. Treatment of pets for both groups was assessed using the full *Battered Partner Shelter Survey* (BPSS) and the *Families and Pets Survey*. The complete BPSS includes the same open ended questions about harm to pets within the abusive household used in Ascione (1998) plus questions about veterinary care and reactions to animal abuse. The *Families and Pets Survey*, used for the control group, is exactly the same as the BPSS, except for the shelter-related and changes in the partners' violence questions. Thirty-nine children in the domestic violence group were interviewed using the *Children's Observation and Experience with Their Pets Survey*, which is a similar tool to the BPSS, asking about pet ownership; if the child has ever seen a pet hurt or killed; if the child has hurt or killed a pet; and feelings about their reactions to seeing or hurting a pet. Child Behavior Checklists were completed by the mothers of 37 children in the domestic violence group, and 58 children in the control group to obtain Total Behavior Problems, Internalizing Problems, and Externalizing Problems scores for each child.

Women in the domestic violence group were significantly more likely to report that their partners had threatened to hurt or kill pets than the control group (52.4% vs. 12.5%, Chi-square (1, 221) = 41. 14, $p<.001$). Women in the domestic violence group were also significantly more likely to report that their partners had hurt or killed pets (54.0% vs. 5.0%, Chi-square (1, 219) = 65.43, $p<.001$).

Witnessing animal abuse occurred for 61.54% of children in the domestic violence group, and only 2.9% of children in the control group. Mothers in the domestic violence group reported that 10.5% of children selected for interviews (n=38) had hurt or killed pets, and 25.7% of their other children had also hurt or killed pets. Forty percent of the children in the domestic violence group who were interviewed indicated that someone had threatened their pet, and 66.7% reported that they had seen or heard one of their pets hurt. Twenty-seven children answered a question about how they felt when their pet was hurt or killed, and 59.3% said they were very upset, 33.3% said they were sort of upset, 3.7% said not upset at all, and 3.7% were not sure. Fifty-one percent of the children said they had protected their pets to save them from being hurt.

This study is an improvement over the two previously discussed studies (Ascione, Weber, and Wood, 1997; Ascione, 1998) because of the larger sample size of women, but also the use of a comparison group. However, the number of children interviewed is still small. Much of the information gathered is dependent upon the mothers' responses, and it is possible that they may not be aware of all of their children's behavior. While this study did not assess for child abuse, it does point to the fact that children in violent families are not only hearing threats against family pets, but also witnessing pets being hurt or killed, and in some cases are hurting animals themselves. Additionally, 51% of the children interviewed stated that they had protected their pets. While details of how the children went about protecting their pets are not provided, it is not out of the realm of possibility that these children may be putting themselves in danger to protect their pets.

DiViney, Dickert, and Lockwood (1983) selected a convenience sample of 53 families out of a pool of 200 eligible families involved with New Jersey's Division of Youth and Family Services. All of the families met criteria set by state law as having committed child abuse, owned

pets, and were able to meet the interview schedule. The sample was not significantly different from the general population in pet ownership or reasons for owning pets. While the difference was not statistically significant, the abusive families reported a high proportion of younger pets than the general population, possibly indicating higher turnover and higher mortality for animals in these families.

Using Leavitt's (1978) criteria for animal abuse, it was determined that 60% of the sample met at least one criterion for abuse of the family pet. Additionally, 88 percent of families that met the criteria for committing child physical abuse also reported that pet abuse occurred, while animal abuse was reported in only 34% of families were physical abuse of children was not present. Caregivers were reported as having similar unrealistic expectations of both the children and the animals in the household, and both children and animals often experienced long-term neglect. The authors hypothesized that for both children and animals, abuse may arise from caregivers' lack of knowledge about effective, non-abusive ways to reinforce desired changes in behavior. Social desirability bias was an obvious problem during the interviews as client responses contradicted circumstances reported by case worker's observations for 17% of the sample (DiViney, Dickert, and Lockwood, 1983).

Retrospective Studies with Adults

Flynn (1999) surveyed 267 undergraduate students at a public Southeastern university about their experiences with animal cruelty and family violence using an 18 page questionnaire. Items about animal cruelty were taken from Miller and Knutson (1997), who adapted the Boat Inventory on Animal Related Experiences. Animal cruelty was operationalized as whether a participant had ever killed a pet; killed a stray or wild animal; hurt or tortured an animal as a

means of teasing or causing pain; touched an animal sexually; or had sex with an animal. Killing for food, hunting, and mercy killing acts were excluded.

Corporal punishment was operationalized as “physical punishment, like spanking, slapping, or hitting” (p. 974) and was measured by a frequency range from never to more than 20 times, separated by parent. The authors state that this definition of corporal punishment is identical to the definition used in Turner and Finkelor (1996) and similar to what has been used in other studies. Because this definition does not include hitting with objects, it is intended to weed out abusive behaviors.

Family violence was also measured. Child abuse was assessed by asking participants if their step/parents had ever kicked, punched, bit, choked, attacked them with a weapon, or beat them up. Violence between step/parents was assessed by asking how often during childhood did one step/parent hit or throw something at the other parent.

In this sample, 18% of participants reported they had committed acts of animal cruelty—shooting and direct physical aggression, i.e., hitting, beating kicking, or throwing, being the most common types—and 45% said they had witnessed others be cruel to animals. As in similar studies, males were more likely to commit acts of animal cruelty than females (35% vs. 9%), and were more likely to be exposed to animal cruelty.

For the entire sample, corporal punishment was found to be significantly related to animal cruelty. Specifically, participants who reported being cruel to animals reported higher frequencies of corporal punishment. Multiple regression analysis was used to control for child abuse and family violence to determine the relationship between corporal punishment and animal abuse. When analyzed by gender, the authors found that for females corporal punishment was not related to animal cruelty. For males, the relationship remained, but it was dependent upon

which parent administered the corporal punishment; male participants who received high frequencies of corporal punishment from their fathers were more likely to have abused animals. Corporal punishment from the mother made no difference in the rate of animal cruelty. The authors conclude that it is male-to-male physical punishment that increases the likelihood of boys committing acts of animal cruelty, which is similar to the results of clinical studies of aggressive criminals and juvenile delinquents also discussed in this paper (Felthous & Kellert, 1986; Kellert & Felthous, 1985; and Tapia, 1971).

The correlational nature of this study is a significant limitation in that is unknown whether high rates of corporal punishment lead the child to commit animal cruelty, or the other way around. Retrospective-recall bias may have led to under-or-over- reporting of the rates of all the variables. Flynn (1999) also asserts that the use of a convenience sample of Southern university students may have influenced the results due to corporal punishment being more acceptable in the South than other parts of the country. Additionally, students from rural areas may have more exposure to animals, leading to more opportunities for cruelty than may be found elsewhere in the country. Lastly, while the definition for corporal punishment used in this study has been used in others, one could argue that hitting and slapping are more abusive behaviors than spanking, particularly since body parts were not indicated (hitting on the buttocks vs. hitting across the face or torso) and could lead to bias of the results. Therefore, it is possible that many of the participants who indicated that they experienced “corporal punishment” may actually have experienced what other people would describe as abuse, and that it is those people who experienced a more severe form of corporal punishment are the ones who are more likely to abuse animals, and it is not corporal punishment but actually physical abuse that is correlated to committing animal abuse.

In Felthous (1980), 346 male psychiatric inpatient service clients were rated according to their level of aggressiveness toward people based on structured interviews about their prior aggressive behavior, which was defined as threatening serious bodily harm, carrying a knife or firearm with the intention to use it as a weapon, and/or causing injury that needed medical or dental attention. The patients were ranked from 1, no history of aggressive behaviors, to 5, the most aggressive. Fifty-three patients were identified as 5's on aggressiveness and were labeled the *Assaultive Group*. Eighteen patients reported a history of repeated animal torture and injury of dogs and cats, and these people were labeled the *Animal Cruelty Group*. While categorization in the Animal Cruelty Group was independent of being in the Assaultive group, the Animal Cruelty group was skewed toward high levels of aggressiveness toward people. Both the Assaultive and the Animal Cruelty Group completed a multiple choice questionnaire about a variety of childhood experiences thought to influence aggressive behavior in adulthood.

Over 60% of both groups reported that they had received brutal punishments by both parents, and had temper tantrums, destructive and assaultive outbursts, childhood fights and school truancy. Using a chi-square test, men in the Animal Cruelty group were significantly more likely to report prolonged separation from their father figures, having alcoholic father figures, and setting uncontrolled fires than men in the Assaultive group. The authors conclude that parental brutality may be etiologic for both animal cruelty and aggressiveness, but parental neglect, including parental alcoholism, may be more specific to animal cruelty. How generalizable these findings are is questionable however, do to the use of a small in-patient psychiatric sample of all men.

In a similar but more recent study, DeGue and DiLillo (2009) surveyed 860 students recruited from three universities in California, Nebraska, and Ohio. A majority of the sample was

White (70.1%) and female (75.6%). The students completed the Computer-Assisted Maltreatment Inventory, a newly developed computer-aided, self-report of childhood physical, sexual, and psychological abuse, neglect, and domestic violence exposure. To measure history of animal abuse, participants completed the Animal Violence Inventory, which is a modified version of the Boat Inventory on Animal-Related Experiences. Participants were asked to indicate whether they had witnessed someone intentionally neglect, hurt, torture, or kill an animal or if they had intentionally done any of those things themselves, specifically excluding hunting or farming activities.

About 22.9% of the full sample reported witnessing some form of animal cruelty as children, and a majority of those indicated that it occurred during middle childhood or adolescence. Only 4.3% of the full sample indicated perpetrating animal cruelty. Significantly more males than females reported participating in animal cruelty (Chi square (1, 860) = 18.4, $p < .01$), and 77.8% of participants who committed acts of animal cruelty reported that they had engaged in those behaviors 2 to 5 different times.

Almost half (49.4%) of the sample reported experiencing at least one type of family violence growing up, with physical abuse being the most common. To have a conservative estimate of physical abuse, the authors chose to only include participants whose physical abuse score was higher than that over the overall sample mean (27.2%) Sexual abuse was reported by 15.7% of respondents, and 17.7% reported witnessing domestic violence between their parents.

Overlap between child maltreatment, domestic violence, and animal cruelty exposure (witnessing and perpetrating) was analyzed. A majority reported only being exposed to one type of violence (37.2%), followed by 36.2% reporting no exposure to any type of violence, 17.8% reporting being exposed to two types, and 4.1% reporting being exposed to all three types of

violence. Family violence victims were more likely to report exposure to animal cruelty than those who did not experience family violence (Chi-square (1,860) = 7.3, $p < .01$). Binary logistic regression analyses were used, and the authors found that both witnessing and perpetrating animal cruelty were significant predictors of family violence, and increasing the odds of child abuse or domestic violence exposure by 1.5 to 2 times. A majority of the participants who reported animal cruelty perpetration (62.2%) also reported child maltreatment and exposure to domestic violence.

DeGue and DiLillo (2009) suggest that these findings indicate that physical violence is a general state for some families, meaning that there are multiple victims and perpetrators in the family. The authors state that underreporting of exposure may be a limitation in their study because the rates are lower than those reported in other college samples (Flynn, 2000; Miller & Knutson, 1997). Retrospective-recall bias is another limitation which may have influenced the data.

Henry (2006) used a sample of 153 women and 133 men who were enrolled in introductory psychology classes to explore the relationship among empathy, the home environment and attitudes toward animals in relation to animal abuse.

Henry (2006) utilized the Boat Inventory on Animal-related Experiences (BIARE) as used by Flynn (1999a, 1999b) but further modified it by deleting a section pertaining to sexual contact with animals. The first section of the inventory explored the participants' experience with pet ownership and attachment to pets. The second section, consisting of four questions, was used to assess participants' engagement in animal abuse, an answer of yes on any of the questions indicating that he/she has committed an act of animal cruelty. Follow-up questions were asked to

gain information about the age of the participant when they committed animal abuse, the number of separate incidents, and the types of animals they abused.

The Attitudes toward the Treatment of Animals Survey (ATTAS) was used in Henry (2006) to determine the participants' sensitivity toward the treatment of animals. On the 23 item scale, participants are asked to indicate to what degree they are bothered by thinking about a particular type of treatment of animal, such as failing to provide adequate food, water, shelter or medical care; animal fighting; or hurting or killing an animal for no particular reason. Higher scores on this scale indicate greater discomfort thinking about these situations.

Two final measurement tools were used in Henry (2006). The Interpersonal Reactivity Index (IRI), a 28-item scale which assesses empathy across four dimensions, was used to assess for individual differences in empathy. The Child Abuse and Trauma Scale was used to assess experiences in the home while growing up. This 38-item measurement tool is separated into three subscales: Punishment, Negativity, and Sexual Abuse. Participants respond to each item on a five-point scale ranging from 0 "Never" to 4 "Always". Participants who scored about the 75^{th} percentile on any subscale were considered high on that dimension. Because only 11 women reported participating in animal abuse, the animal abuse related analyses were limited to the men in the sample. Using cross-tabulation, Henry (2006) found that men who scored above the 75^{th} percentile on the Sexual Abuse dimension were more likely to participate in childhood animal abuse than men who did not. A significant relationship between a history of sexual abuse and the age when they first participated in animal abuse was also found (Chi square = 8.69, $p = .013$) Sixteen men reported high levels of sexual abuse, and 13 (81%) of these men reported participating in animal abuse before the age of 13. Henry's (2006) finding that history of sexual abuse is related to a history of childhood animal abuse is consistent with the previous two studies

discussed. Retrospective recall is a limitation of this study because the data are limited by what the participants can remember, which may result in under-reporting. Lastly, no conclusions can be drawn about women who committed childhood animal cruelty as they were excluded from the statistical analysis.

One of the strengths of this section of the literature is the wide variety of samples used in the studies. Despite the differences in the populations studied—mentally ill juveniles, retrospective studies of college students, or children who witnessed domestic violence—the connection between family dysfunction and childhood animal cruelty was consistently found. In the next section, literature involving a more specific population—juvenile delinquents—and the connections to family dysfunction and animal cruelty is reviewed.

Animal Cruelty and Juvenile Antisocial Behavior

The articles in the previous section all involved samples in which children were experiencing physical or sexual abuse and/or witnessing domestic violence. In this section, the participants in the studies have been selected because they have all engaged in some type of antisocial and/or delinquent behavior and the authors investigate their family situations and the occurrence of animal cruelty.

Non-lethal Antisocial Behaviors and Animal Cruelty

Henry (2004) explored the relationship between delinquency and animal abuse by surveying 92 female and 77 male students enrolled in Introduction to Psychology classes. A majority (75%) of the participants identified themselves as white, and the age range was from 17 to 55 years, with the mean age being 23.9 years.

Three measurement instruments were used in this study: An adaptation of the Boat (1999) Inventory on Animal Related Experiences as used by Flynn (1999a, 1999b), the Self-

Reported Delinquency (SRD) Questionnaire, and the Attitudes toward the treatment of animals scale (ATTAS).

The Boat Inventory on Animal-related Experiences as used by Flynn (1999a, 1999b) was further modified by deleting a section pertaining to sexual contact with animals. The first section of the inventory explored the participants' experience with pet ownership and attachment to pets. The second section, consisting of four questions, was used to assess participants' engagement in animal abuse, an answer of yes indicating that he/she has committed an act of animal cruelty. Follow up questions were asked to gain information about the age of the participant when they committed animal abuse, the number of separate incidents, and the types of animals they abused.

The Self-Reported Delinquency (SRD) Questionnaire was changed to a paper-and-pencil survey that could be administered in a group setting for the purpose of this study. Participants were asked to indicate whether they had ever engaged certain behaviors, and if they had, whether it had been within the past year. Thirty five delinquent behaviors were listed, including acts of theft, arson, fraud, and assault.

The Attitudes toward the Treatment of Animals Survey (ATTAS) was used to determine the participants' sensitivity toward the treatment of animals. On the 23 item scale, participants are asked to indicate to what degree they are bothered by thinking about a particular type of treatment of an animal, such as failing to provide adequate food, water, shelter or medical care; animal fighting; or hurting or killing an animal for no particular reason. Higher scores on this scale indicate greater discomfort thinking about these situations. A pilot study was done for this scale on a separate sample of 104 undergraduate students. In the pilot study, men were found to have significantly lower ATTAS scores than women, indicating less sensitivity among men about the treatment of animals. Among people who reported that they had witnessed an act of

animal cruelty, ATTAS scores were consistent with the level of difficulty they reported witnessing the act, meaning that people who reported that the event bothered them a great deal had high ATTAS scores while those that said the event did not bother them had the lowest ATTAS scores. For this sample, alpha = 0.93, indicating good internal consistency.

Eighty-six (50.9%) of the participants indicated that they had observed at least one act of animal cruelty as children, and 37.3% indicated that they had seen more than one. Thirty participants reported committing animal cruelty at least once, and 21 reported multiple acts of animal cruelty. Men were more likely than women to report both witnessing and committing acts of animal abuse.

Using multivariate analysis of variance (MANOVA), Henry (2004) found that those who reported observing animal cruelty and those reporting participation in animal cruelty had higher delinquency scores than those who did not ($F(1, 157) = 12.41$, $p < .01$; $F(1, 70) = 4.05$, $p < .05$). Additionally, those participants that reported multiple instances of animal cruelty also had significantly higher delinquency scores than those who did not engage in multiple animal abuse acts.

The generalizability of this study is limited to men because only three women in this sample indicated that they had committed acts of animal cruelty, restraining the analysis to just the men in the sample who had committed animal abuse. Retrospective recall is also a limitation of the results. While no time-order was specified in the article, the results do point toward the positive relationship between animal cruelty and juvenile delinquency. No information was presented in this article about the social context of the animal abuse, specifically whether these events occurred in a group context or alone. As previously discussed, Ascione (2001) categorizes juvenile animal abuse into three categories: exploratory/curious, pathological, and delinquent.

For the participants who indicated they had participated in multiple incidents of animal cruelty, pathological or delinquent types seem equal possibilities. In the case of pathological abuse, mental health intervention is indicated, while delinquent animal abuse may be addressed with empathy development and separation from the peers who are supporting the abusive and criminal behavior.

Bullying

The relationship between bullying, victimization experiences, and the abuse of non-human animals is the topic of interest in Henry and Sanders (2007). Using a retrospective survey design, the authors surveyed 185 male college students enrolled in sections of Introductory Psychology. A majority of the men were white (72%) and the age range was 18 to 48 years, with a mean age of 22.2 years.

As in Henry (2004) a modified version of the BIARE and the Attitudes toward the treatment of animals survey (ATTAS) were used. To assess the participants' histories of being a victim or a perpetrator of bullying, a modified version of the Bully/Victim Questionnaire was used. The 63 items on the questionnaire were separated into three sections to assess their experiences in elementary, middle, and high school. Participants were asked to indicate to what degree they were the victim of verbal and physical bullying and to what degree they were the perpetrator of verbal and physical bullying in each section. Verbal bullying was defined as behaviors such as name calling, spreading rumors or lies, racial comments, or sexual comments. Physical bullying included behaviors such as hitting, kicking, pushing, stealing, destroying property, or being threatened or forced to do things.

Results of this study indicated that there was no significant relationship between bullying and committing a single act of animal abuse. However, using a chi-square tests for

independence, the authors found that men who scored high on both being a victim of physical bullying and a perpetrator of physical bullying were significantly more likely to report committing multiple acts of animal abuse. These men also reported significantly less discomfort on the Cruelty and Utilitarian subscales of the Attitudes toward the Treatment of Animals Survey (ATTAS), meaning they indicated less discomfort thinking about animal abuse or exploitation than men who had reported one or no acts of animal cruelty. These results are similar to Baldry (2005), who found that boys who were victims or perpetrators of "indirect" or "direct" bullying were more likely to participate in at least one type of animal cruelty.

The results of Henry and Sanders (2007) indicate that aggressive behaviors, in this case physical bullying and multiple acts of animal cruelty, are related. However, it is not possible to know if one precedes the other from this study, or if both bullying and animal abuse are triggered by some other mechanism such as violence in the family. This study is limited by retrospective recall, meaning that all the information may not be accurate, and by the fact that the sample consisted only of males. According to the authors, female bullying is often defined by damaging relationships while male bullying tends to be more physical and related to dominance, and therefore the relationships between female bullying and animal abuse may be different.

Baldry (2005) also explored the relationship between bullying, family violence, and animal abuse during childhood, using a community sample of 268 girls and 264 boys from five different elementary and middle schools in Rome, Italy.

The Physical and Emotional Tormenting Against Animals Scale (P.E.T) for preadolescents and adolescents, which measures exposure to animal abuse as well as committing animal abuse. Exposure to domestic violence was measured using a 10 item version of the Conflict Tactic Scale (Straus, 1979) so that it was appropriate for children. Child abuse was

measured using four questions, two to measure verbal abuse and two for physical violence, with response categories in the same five point Likert scale format. Indirect/direct bullying and victimization were measured using the Italian modified version of the Olweus bullying questionnaire. Indirect bullying/victimization behaviors include doing or being the victim of spreading rumors, isolation, and giving/getting the silent treatment. Direct bullying/victimization behaviors include doing or being the victim of name calling, physical injury, taking belongings, and threatening.

While all measured on interval scales, the variables were converted to dichotomous measures. Slightly over 40% of the children reported at least one act of animal cruelty, with significantly more boys (46%) reporting animal cruelty than girls (36%). Approximately a third of the children reported father-to-mother violence and almost a quarter reported mother-to-father violence. Approximately 40% of the children reported that their father physically harmed them, with more boys reporting paternal abuse than girls. Gender differences were also found regarding bullying and victimization. Boys reported a higher prevalence of direct victimization than girls (48% vs. 37%), and the same with bullying (39% vs. 25%). About 34% of the sample reported indirect victimization and 25% reported indirect bullying, but no significant gender differences were found.

Using odds ratios, the author found that the odds of a child abusing an animal increased by a factor of three if the child had been exposed to domestic violence or had witnessed others harming animals (OR = 3.1, CI = 95%, $p < .05$, one-tailed). Unlike some other studies, physical abuse by the father was associated with animal abuse for girls, but not boys, and maternal verbal abuse was associated with animal abuse for boys, but not girls. Children who engaged in direct bullying were twice more likely to have abused animals than non-bullying children. Being a

victim of bullying and a perpetrator of verbal abuse was positively associated with animal abuse for boys only. Using multivariate analysis by gender, direct victimization was the strongest associate with animal abuse for boys, followed by indirect bullying at school. For girls, exposure to others committing animal abuse, and father's verbal abuse were the strongest associations.

The reported rates of animal abuse are higher in this study than in others, just like Baldry (2003), most likely due to the use of the PET scale which includes more relatively minor acts of animal abuse than other scales. Social desirability bias may be a limitation resulting in lower reporting rates due to the nature of the topics. While the children were assured of confidentiality, they still may have been reluctant to admit to animal abuse, bullying others, or that their parents were violent at home. Overall the author concludes that while the relationships may not be entirely clear, animal abuse is related to bullying behaviors and family violence, and should be taken seriously by child welfare practitioners.

Gullone and Robertson (2008) also used the PET scale in their study of 249 adolescents from Melbourne, Australia regarding the relationships between bullying and animal cruelty. Only students with parental permission were allowed to participate and only 11.32% of parents gave consent. Victimization and participation in bullying was assessed using four items from the Peer Relations Questionnaire (PRQ; Rigby & Slee, 1993), which is a 41-item survey with scaled response categories. Cronbach's alpha for the victimization scale for this sample equaled .81 for this sample. Reliability analysis for the participation in bullying scale resulted in a Cronbach's alpha of .72. Parent conflict was assessed using the Family Environment Scale (FES; Moos & Moos, 1986), a 90-item, 10-subscale, true/false response questionnaire. Internal consistency for this sample using this scale yielded a Cronbach's alpha coefficient equaling .76.

Eight participants were excluded from the data analysis as they left out entire sections of the questionnaires, bringing the sample to 102 males and 139 females, with the average age being 13.8 years old. Approximately 21% of the adolescents indicated that they engaged in animal abuse at least “sometimes” which is consistent with Flynn, (2000b) and Miller and Knutson (1997). About 37% of the participants indicated that they had witnessed animal abuse at least “sometimes”. About 18% of the adolescents reported engaging in bullying behavior, and about 30% indicated that they had been bullied at least once in the past year.

Two separate hierarchical multiple regression analyses were conducted; the first to predict animal abuse, the second to predict bullying as predicted by demographics, being a victim of bullying, witnessing animal abuse, and family conflict. In the first regression analysis, family conflict was found to be a significant predictor of animal cruelty as was witnessing animal abuse. The full model accounted for 24.9% of the total variance in animal abuse. For the regression model to predict bullying, witnessing animal abuse was found to be a significant predictor of bullying behaviors, as was being a victim of bullying. However, the full model only accounted for 11% of the variance in bullying, suggesting that other more important factors were not included in the model.

The low return rate is a limitation of this study. It is unknown whether there are differences between the families in which the parents gave consent for their children to participate and those families who did not, and what those potential differences may be. Self-selection bias and recall bias are also potential limitations because of the self-report format of this study. Like all studies in this subject area, social desirability bias is also a potential barrier due to the sensitive nature of the topics.

Sexual Offenses and Bestiality

Duffield, Hassiotis, and Vizard (1998) explored the incidences of bestiality among juvenile sex offenders in their review of case files of the first 70 children and adolescents who were referred to a tertiary psychiatry service specializing in assessment and treatment of young sexual abusers. Seven males were identified as committing at least one sexual act with an animal, the youngest being 8-years-old, the oldest being 16 years of age.

All seven of the boys identified as having committed acts of bestiality had a history of sexual abuse, and frequently there was more than one abuser. Five of the boys experienced physical as well as sexual abuse. In addition to the sexual acts with animals, most often the family pet(s), all of these adolescents displayed aggressive sexual behaviors including sexual assaults on other children in some cases attempted sexual assaults on adult women. Other problem behaviors displayed by these adolescents include non-sexual animal abuse, violent outbursts, self-harm, bullying, and fire setting. Learning disabilities and mental health problems were also present among these seven children.

While this case review is of a very small sample of juvenile sexual offenders, it illustrates how bestiality is one, not a singular deviation in behavior, and two, can be a sign of what abuses are occurring to children. All seven of these boys who had multiple acts of bestiality in their records were being sexually abused by more than one person—including at least in one case where a boy who at the age of 6 was instructed by his abusers to do sexual acts with three dogs--and a majority of them were also being physically abused. As this is a case review, dependent upon what is in the files, it is possible that more juvenile sexual offenders have committed acts of bestiality, and the question was simply never asked.

Fleming, Jory, and Burton (2002) compared the family characteristics, victimization history, and the number of offenses of juvenile offenders who admitted to having sex with non-human animals, i.e. bestiality, to juvenile offenders who did not. Three-hundred and eighty-one institutionalized male youth offenders living in either a training school, residential treatment center, or a non-profit group home setting in a Midwestern state completed an anonymous self-report survey.

The survey was administered by trained research assistants and took 2 to 3 hours to complete. Five scales were used in the survey:

- The Sexual Abuse Exposure Questionnaire (SAEQ) is a 24 item scale that asks the participant what type of sex acts they have experienced, ranging from non-contact behaviors, contact behaviors, and penetration. If a participant answered "yes" to having a sexual experience, they were asked to supply details about the incident including their relationship to the perpetrator, the frequency and the duration of the experience.
- The Self Report Sexual Aggression Scale (SERSAS) is a version of the SAEQ modified for the purpose of this study to determine what acts the juveniles have committed. For example, one item on the SAEQ is: "Has anyone ever shown you their private parts or exposed themselves to you?" On the SERSAS, this question is changed to: "Have you ever shown your private parts in front of a person or persons?" Questions about sexual contact with animals were included on this instrument, including the type of acts and age at the time of the encounters.
- The Childhood Trauma Questionnaire (CTQ) is a 53 item screening tool for past victimization experiences including neglect and physical, sexual, and emotional

abuse. Item formats include Likert-type scales and stem-sentences with a choice of responses.

- The Family Attachment and Changeability Index 8 (FACI-8) is a 16 item scale used to measure family cohesion and adaptability. Likert-type scales were used for the response categories, ranging from "strongly agree" to "strongly disagree".
- The Family Problem Solving and Communication Index (FPSCI) is a scale to assess the communication style of the family, whether it is incendiary or affirming. Sentence stems as well as 10 specific answer choices are provided.

The authors report that Cronbach's alpha ranged from .76 to .89, indicating acceptable levels of internal consistency reliability.

Six percent of the 381 juvenile offenders (n = 24) admitted to having sex with animals. Twenty-three of those twenty-four juveniles who indicated bestiality also admitted to sexual offenses against people, however only 12 of the 24 had been adjudicated for sexual offenses. The authors separated the youth into three categories for statistical comparison: Animal Offenders, Human-only sex offenders, and Non Sex Offenders. No significant differences in age or race were found between the three groups. However, significant differences in the victimization history and family characteristics were found. Both Animal Offenders and Human-only Sex Offenders came from families with less affirming communication ($F(1,343) = 6.21$, $p < .01$) and more incendiary communication than the Non Sex Offenders. Animal Offenders and Human-only Sex Offenders were also more likely to come from families with lower attachment scores ($F(1, 365) = 6.72$, $p < .01$), families that were less adaptable ($F(1,367) = 5/07$, $p <. 01$), and less positive family environments ($F(1, 334)$ 13.29, $p < .001$), with Animal Offenders coming from the least positive family environments. Animal Offenders and Human-only Sex Offenders were

found to have experienced more emotional neglect ($F (1, 378) = 14.06$, $p < .001$), more emotional abuse ($F (1, 378) = 21.48$, $p < .001$), more physical abuse ($F (1, 378) = 12.88$, $p < .001$), and more sexual abuse ($F (1, 378) = 63.01$, $p < .001$) than Non Sex Offenders. Post-hoc analyses indicated that while Animal Offenders did not suffer more physical or sexual abuse than Human-only Sex Offenders, they did experience more emotional abuse and neglect. Animal Offenders reported more sexual victimization events than both of the other groups and more offending events against humans than the Human-only Sex Offenders.

Based upon their results, the authors suggest that the juveniles in the Animal Offender group should be considered a sub-group of the Sex Offender group because 23 of the 24 Animal Offenders indicated that they had committed sexual offenses against humans, and are more advanced because they report significantly more offenses against people than the juvenile Human-only sex offenders. In addition to reporting more offenses, Animal Offenders in this study were found to have more traumatic victimization histories and problematic family histories. These results indicate that bestiality may be an indicator of other situations going on in the juvenile's environment, and intervention is warranted.

One limitation of this study is the use of a convenience sample. While the authors do not include information about how many juveniles were in the population, they do state that 14 young men were not allowed to participate due to concerns that asking them about trauma may disrupt their therapeutic processes. Additionally, parents had to provide consent and the youths had the choice to participate; it is unknown if there were any differences between those who participated and those who were not allowed or chose not to participate. This study also used only adjudicated juvenile male offenders, meaning that they all have committed aggressive or violent offenses. It is possible that bestiality may occur in female or non-violent populations for

different reason and without any connection to a history of victimization or offenses towards human beings.

Fire-setting

In two articles, Wax and Haddox (1974a; 1974b) explored the case studies of six adolescent male delinquents who displayed what is known as the triad: enuresis, fire setting, and animal cruelty. These boys were selected from 46 cases referred to the California Youth Authority during a 12 month period because they had documented incidents of all three behaviors. While the authors do not explicitly define their factors, all six adolescents displayed assaultive behavior and sexual deviation. Five of the six boys were also found to have "family disorganization", maternal deprivation, and were diagnosed with psychosis/borderline. This study is limited by its small sample size, sampling methods, and lack of, at least published, definitions. However, what it does show is the commission of animal cruelty occurring among environmental issues as well as antisocial behaviors that could be addressed by professionals.

Slavkin (2001) explored whether enuresis and animal cruelty are associated with recidivistic fire setting among juveniles. Using the Marion County Arson Investigation Network (MCAIN) database, the records of 78 fire-setters aged 3 to 6, 240 fire-setters aged 7 to 10, 157 fire-setters aged 11 to 14, and 413 fire-setters aged 15 to 18, were used for the analysis. Interviews were also conducted with the juvenile, the parent/guardian, and an MCAIN Fire Stop Program professional, and the juvenile and parent/guardian also completed a questionnaire.

The presence of enuresis, cruelty to animals, and recidivistic fire-setting behaviors was determined by the Parent Fire Risk Questionnaire. The Parent Fire Risk Questionnaire (Fine, 1997) is a 116 item questionnaire with three point Likert scale response categories: rarely to never; sometimes; and frequently. Cruelty to animals was assessed through one item as a part of

a 14-item“affinity for aggression” scale, which is similar to how it assessed on the Child Behavior Checklist, and therefore has similar limitations as previously discussed. Cronbach’s alpha for the “Affinity for Aggression” scale was .67, indicating fair internal consistency among the items (Slavkin, 2000).

Although the rate of enuresis was higher among these juveniles who set fires than juveniles in the general population, no significant relationship was found between enuresis and recidivistic fire-setting. However, fire-setting juveniles who were identified as also being cruel to animals were more likely to engage in recidivistic fire setting (Chi-square (1) = 25.88, p = .001). The authors conclude that while animal cruelty may be a predictor of fire setting behavior, animal cruelty is more likely one of many delinquent behaviors exhibited by juvenile fire starters. Examining the fire setter’s history, cognitive and behavioral development, and the home environment in addition to assessing for animal cruelty is recommended.

Slavkin’s (2001) study benefits from gathering information from both the juvenile and the parent. Unfortunately, the article does not state whether the juveniles were questioned about animal cruelty, only that the parents’ responses were used to determine whether animal cruelty occurred. While a convenience sample was used, the large number and the wide spectrum of ages (3-to-18 years) of the juvenile fire-setters in the sample lend to the strength of this study.

Antisocial Behaviors with Lethal Intent and Animal Cruelty by Juveniles

Homicide

It was Sendi and Blomgren’s (1975) intention to identify factors that predispose adolescents to commit homicide. The histories and current behaviors of three groups of adolescent males admitted to the Child Psychiatry Divisions of Clinton Valley Center during a six year period were evaluated by four raters. Ten adolescents who had committed homicide

form the *committed murder* group. A comparison group consisted of ten boys who had unsuccessfully attempted homicide or threatened to commit murder. A control group of ten adolescent boys who were not homicidal was randomly selected from other hospitalized patients for diagnoses such as schizophrenia, personality disorders, organic brain syndrome, and learning disabilities compounded by emotional and behavioral disorders.

Animal cruelty was found to be present in each of the groups. However, the authors only looked for significance for the triad behaviors—enuresis, fire setting, and animal cruelty—all together, so information about statistical significance of animal cruelty alone is not available. Two of the ten adolescents who *committed murder*, three of the ten who *threatened homicide* and three of the boys in the control group committed animal cruelty. None of the boys in this study presented all three of the triad behaviors.

Using chi-square tests, adolescents who had committed murder and those who had threatened or attempted homicide were significantly different from the control group in that they experienced an "unfavorable home environment", which was defined as a home where "a considerable amount of stress was present, including parental neglect, abuse, or absence (p.425)." Adolescents who committed murder were also significantly more likely than both groups to have experienced parental brutality, to have been exposed to violence or murder in their home environment, and the sexual seduction of parent.

One of the most apparent limitations is the small sample sizes used in this study, which limits the statistical power. Additionally, the control group consisted of mentally and/or disabled boys, which means we have no basis of comparison of adolescents who commit murder to those in the typical population, although significant differences were found between the control group and the *attempted murder* and *committed murder* groups. It is unclear how information about

animal cruelty was collected. If the information was collected from parents or juvenile criminal records, it is likely that the true prevalence of animal cruelty is much greater than reported due to the secretive nature of children and adolescents who commit acts of animal cruelty. Particularly for the adolescents who committed murder, who the study showed experienced abuse and often had violent parents, it is also possible that animal cruelty was not seen as significant enough to report or may be a family norm. Lastly, since the authors only looked at animal cruelty as a part of the triad behaviors, it is impossible to know if there is a significant relationship between animal cruelty and adolescent homicidal behaviors.

Lewis, Shanok, Grant and Ritvo (1983) also sought to discover what distinguished homicidal children from non-homicidal children in their study of a total of 55 children admitted to a psychiatric inpatient ward for children between 3 and 12 years of age in a hospital in a major city during the late 1970s. Hospital records were used for data collection, and information about diagnoses, symptoms, family histories and medications was collected. Four raters evaluated each of the children's files. To be considered homicidally aggressive, the child must have committed an act that would have resulted in death or serious injury if done by an adult, threatened someone with a lethal object or weapon, or deliberately have set someone on fire and three of the four raters had to agree. Four children were excluded because the raters could not reach agreement. Out of 51 children, 21 were categorized as homicidally aggressive and 30 were not.

Compared to the children who were not homicidally aggressive, the homicidally aggressive children were more likely to be from violent homes where their fathers were violent toward their mothers (13% vs. 62%. Chi square = 11.02, p =.001). Additionally, homicidally aggressive children were also more likely to have alcoholic fathers (10% vs. 52%. Chi square = 9.115, p = .003). While there was a difference between the proportions of homicidally aggressive

children and children who were not homicidally aggressive who had a history of cruelty to animals (13 % vs. 4%), the difference was not significant. It was not reported whether there was a relationship between family violence and a history of animal cruelty.

While the authors were not able to find a significant difference between the two groups, this may be due to low statistical power because of the small sample size. Also, as the authors indicate, data collection by file review is limited by the information that was included in the files. Due to the severity of the actions and diagnoses of these children, it is possible that animal abuse was not considered important enough to ask about or document by the recording physicians in some cases. As previously discussed in this paper, animal abuse is often done in secret, so if information in the files was obtained from the parents instead of directly from the children, it is possible that the parents did not know everything their children had done.

School Shootings

Labeled as "school shootings" by the media, there has been a recent increase in violent incidents by juveniles who attack with the intent to injure and kill multiple victims according to Verlinden, Hersen, and Thomas (2000). Nine multiple victim violent assaults in schools were selected for review in this study because they occurred within three years of when this article was written, involved firearms, and were labeled as "school shootings" in the media. The nine cases reviewed include:

- Barry Loukaitis, age 14, from Moses Lake, Washington shot his teacher and two students in his algebra class, all three of whom died on February 2, 1996.
- On the morning February 18, 1997, Evan Ramsey, age 16, walked into his high school in Bethel, Alaska, and began shooting. He killed the school principal and one student, and injured two others.

- In Pearl, Mississippi, on October 1, 1997, 16 year old Luke Woodham killed two and wounded 7 students after entering his high school with a rifle under his trench coat. It was discovered that her had beaten and stabbed his mother to death with a butcher knife before coming to school that morning.
- Michael Carneal, age 14, killed 3 and wounded 5 students who were participating in a prayer group on December 1, 1997 in Paducah, KY.
- In Jonesboro, Arkansas, Mitchell Johnson, age 13, and Andrew Golden, age 11, killed 4 students and a teacher and wounded 10 others on March 24, 1998. The boys pulled the fire alarm at their middle school to bring the students and teachers outside, and then began firing from their hidden location in the woods by the school.
- Andrew Wurst, age 14, killed one teacher and wounded two students and a teacher on April 24, 1998 after bringing a pistol to his school dance in Edinboro, Pennsylvania.
- On May 21, 1998, Kipland Kinkel, age 15, killed 2 and injured 8 students when he opened fire in his high school cafeteria in Springfield, Oregon. It was discovered that he had also killed his parents the day before.
- Eric Harris, age 18, and Dylan Kiebold, age 17, committed suicide after killing 13 students and injuring 20 at Columbine High School in Littleton, Colorado on April 20, 1999. They also brought explosives, but the explosives failed to detonate.
- In Conyers, Georgia, fifteen year old Thomas Soloman injured 6 students on May 20, 1999. Soloman was apprehended before he was able to kill anyone.

Court records were obtained for the cases in which they were available. Information for the cases which had not been adjudicated was obtained through searches of local and national media and a Lexis Nexis law and public records database search was conducted. The authors

used risk factor checklists for serious youth and school violence to identify commonalities between the nine cases. Categories for risk factors include: individual factors, family factors, school and peer factors, societal and environmental factors, and situational factors and attack related behaviors.

Half of the assailants in these school shootings had performed some type of animal cruelty act. Evan Ramsey threw rocks at dogs for amusement. Luke Woodham had killed his own pet dog. Kipland Kinkel bragged about torturing and killing animals, and was reported to behead cats and display their heads on sticks, and to have blown up a cow with explosives. Eric Harris and Dylan Kiebold reportedly mutilated animals.

Common individual factors among these school shooters included problems with uncontrolled anger, depression, blaming others for problems, threatening violence, and having detailed plans for the shootings. Indications of troubled parent-child relationships and ineffective parenting were present for most families. All of these teenagers lacked social support and prosocial relationships, and instead were isolated and felt picked on or persecuted by their peers. They also all had access to firearms. Lastly, in all cases the shooters explicitly stated their intentions, often including time and place, but were not taken seriously by their peers.

The data collection methods used in this study place some limitations on what information was gathered. Factors that may actually have been present in these cases, such as animal cruelty, may not have been available in the official records or media reports. Additionally, the authors only looked at cases in which the school shooters succeeded. Information about cases in which potential school shooters were caught before being able to act would also be pertinent information, but the authors stated that information about these cases is

not readily available, while information about cases in which people were killed is more easily found.

The studies in this section reveal a pattern of co-occurring antisocial behaviors. Juvenile acts of theft, fraud, assault, physical bullying, fire-setting, and school shootings; All of these anti-social behaviors have been shown by these studies to one degree or another to co-occur with acts of animal cruelty, particularly in juveniles that are displaying more aggressive or violent tendencies. While the offenses explored in these studies differ, there are some consistencies throughout the research. Overwhelmingly, the samples in these studies have consisted of males, particularly when exploring violent offenses. Therefore, based upon our current body of knowledge, we do not know if female offenders will display the same type of behaviors as their male counterparts.

Small sample size is a common limitation throughout much of the literature in this section, except for the studies on bullying. In general, these small samples can be understood because of the relatively small number of juveniles that commit serious and/or lethal crimes. In future research, it may be beneficial to do national studies so that larger samples of juvenile offenders can be studied. Additionally, it may be beneficial to do international studies of young violent offenders, such as school shooters, to better what factors influence anti-social behavior around the world.

In the following section, retrospective research about the childhood experiences of adult criminals is reviewed.

Childhood Animal Cruelty and Negative Experiences among Criminals

Inmates

Experiences with animal cruelty during childhood have also been looked at in studies of adult criminals. Kellert and Felthous (1985) conducted a study comparing the childhood experiences of aggressive criminals, non-aggressive criminals, and non-criminals from Connecticut and Kansas. The criminal groups were selected from Federal penitentiaries and consisted of 63 inmates from Leavenworth, Kansas, and 89 inmates from Danbury, Connecticut. Aggressiveness was based upon behavioral criteria observed by prison counselors, not on reason for incarceration. The non-criminal group consisted of 15 randomly selected men from the Topeka, Kansas area and 36 randomly selected men from the New Haven Connecticut area. Each participant was interviewed using a standardized interview schedule including 440 closed and open ended questions that took 1-2 hours to complete. Topics covered in the interview included demographics, childhood family relationships, relationship to animals during childhood, adult behavior patterns, attitudes toward animals and human aggression. Several measures of violent and aggressive behavior were included in the interview schedule to minimize social desirability bias. Cross-validation of inmates' responses was attempted, but researchers ran into several problems due to the inability to locate people and the unwillingness of inmates' family members to disclose personal information.

Sixty percent of the subjects in this study (n = 152) reported at least one act of animal cruelty. Aggressive criminals (n = 32) reported a higher frequency of acts of animal cruelty than the other two groups, with 25% of aggressive criminals reporting that they had committed 5 or more acts of animal cruelty, compared to less than 6% of moderate (n = 18) or nonaggressive criminals (n = 52) reporting the same, and no occurrence among non-criminals (n= 50). Answers

to open ended questions about the acts of animal cruelty led the researchers to identify nine motivations for animal cruelty. These motivations are:

- To control the animal (i.e., animal abuse as discipline or "training")
- To retaliate against an animal
- To satisfy a prejudice against a species or breed (e.g. hatred of cats)
- To express aggression through an animals (i.e., training an animal to attack, using inflicted pain to create a "mean" dog)
- To enhance one's own aggressiveness (e.g., using an animal victim for target practice)
- To shock people for amusement
- To retaliate against other people (by harming their pets or abusing animals in their presence)
- To displace hostility from a person to animal (i.e., attacking a vulnerable animal when assaulting the real human target is judged too risky)
- To experience nonspecific sadism (i.e., enjoying the suffering experienced by the animal victim, in and of itself)

While the motivations that Kellert and Felthous (1985) identified can reasonably be applied to juveniles, they were still based upon interviews with adults about their experiences as children, and they vary from the motivations identified specifically to pertain to children by Ascione, Thompson, & Black (1997) which were previously discussed.

Seventy five percent of aggressive criminals (n= 49) also reported excessive and repeated child abuse, compared to 31% of nonaggressive criminals (n= 52), and 10% among non-criminals (n = 40). Parental alcoholism and substance abuse were reported by 73% of aggressive criminals, compared to 20% of nonaggressive criminals and 10% of non-criminals. More aggressive criminals also reported that the experienced parental alcohol/drug use and domestic violence (49%) than nonaggressive criminals (12%) and noncriminal (7%). The researchers concluded that aggression among adult criminals may be strongly correlated to a history of family violence and cruelty towards animals, and that acts of animal cruelty committed during childhood should be a considered a potential indicator of family problems and future aggression.

Using self-report surveys, Miller and Knutson (1997) explored the childhood experiences of 314 inmates (84% males, 16% females) of the Iowa Medical and Classification Center who volunteered to participate. The researchers used the abridged Assessing Environments III-Form SD, which uses a true/false format to obtain information about family characteristics often associated with physical child abuse. The scales included were the Deserving Punishment, Antisocial Father, Marital Discord, Mother, Negative Family Atmosphere, Parental Rejection, Poor Peer Relationships, Perception of Discipline, Perception of Sibling Discipline, Sibling Physical Punishment Scale, Positive Parental Contact, and Sibling Deserving Punishment. To assess childhood experiences with animal cruelty, an early version of the BIARE, referred to as the Animal-Related Trauma Inventory, was used.

Participants were separated into groups based up on the most serious crime for which they were charged. Inmates were divided in to the homicide group, violent offenses group, sexual offenses group, and the other offense group which included property crimes, drug related crimes, and possession of a weapon without any person-related or violence-related charges. Approximately 66% of the inmates indicated that they had some sort of experience with animal cruelty, which include witnessing someone else hurt or kill an animal or personally hurting, torturing, or killing an animal for reasons other than hunting, food, or husbandry. However, there were no significant differences between the groups regarding exposure to animal cruelty. Additionally, the only significant correlations relating to composite animal cruelty scores were between it and the Poor Peer Relations scale scores and the Negative Family Atmosphere Scale. Using a one-way ANOVA, statistically significant differences on the AE-III were found ($F(3,293) = 4.79$, $p < .003$) between the groups, and Tukey HSD follow up tests revealed that the

Violent Offense Group scored significantly higher than the other three on the Physical Punishment Scale.

The authors conducted a second study of a convenience sample of 308 undergraduate students at the University of Iowa that were enrolled in introductory psychology classes to serve as a comparison group for the inmate study. The same questionnaires were used as in the inmate study. Witnessing animal cruelty was reported by 48.4% of the university students. Approximately 20% of the entire sample reported engaging in animal cruelty. Significant gender differences were present, with 68.9% of males and 33% of females reporting exposure to animal cruelty. Among the university students, a significant relationship was found between being charged with a crime and childhood exposure to animal cruelty (Chi square = 4.83, $p < .05$). However, this relationship can be attributed to gender as 71.7% of participants who had been charged with a crime were male, and males are disproportionately exposed to animal cruelty. Exposure to animal cruelty correlated to all five of the AE-III scales (Physical Punishment, Poor Peer Relationships, Perception of Discipline, Negative Family Atmosphere, and Positive Parental Contact). However, the strongest correlation which was between Physical Punishment and exposure to animal cruelty, $r = .28$, only accounted for less than 8% of the variance of the animal cruelty measure.

Unlike Kellert and Felthous (1985), however, Miller and Knutson (1997) did not find a strong relationship between childhood animal cruelty and violent criminal behavior, or between childhood animal cruelty and childhood abuse. However, the authors indicate that these results may be due to violations of the assumptions needed for the parametric statistical tests, and the subject groupings may have influenced the findings. The distribution of exposure to animal abuse was positively skewed and extremely leptokurtic, which compromises correlational

analysis. Additionally, in this sample of inmates, there was a high level of punitive punishment, meaning that the range is restricted and therefore again limiting the analysis.

Arluke, Levin, Luke and Ascione (1999) explored the graduation hypothesis in contrast to the deviance generalization hypothesis. The graduation, or escalation, hypothesis theorizes that animal cruelty in childhood will progress as the child develops into violence toward people. In contrast, the deviance generalization hypothesis states that animal abuse is just one of many anti-social behaviors that can arise in childhood and continue into adulthood. Unlike other studies in this field of research, this study did not rely on self-report. The authors reviewed the official Massachusetts Society for the Prevention of Cruelty to Animals (MSPCA) records of 153 people who had been prosecuted for at least one act of animal cruelty between 1975 and 1986. Animal cruelty was operationalized as any investigated case where an animal was intentionally harmed physically. A control group, another uncommon feature of this study compared to others in this research area, was formed using municipal voting lists obtained from each animal abuser's neighborhood in the same year as the cruelty incident occurred. Control cases were matched by gender, socioeconomic status, age range by decade, and the same street. Computerized adult criminal records from Massachusetts for both animal abusers and the control group were obtained, and results coded by criminal offense into categories of violent, property-related, drug-related, public disorder, and/or other offenses.

Their results indicated that animal abusers were significantly more likely to have committed some type of criminal behavior, including violent crimes (Chi square = 68.24, df = 1, $p<.0001$). Additionally, the animal abusers were more likely to have committed a violent crime versus the control group (Chi square = 73.70, df = 1, $p<.0001$). But animal abuse was not only associated with violent crimes. Animal abusers were also four times more likely to be arrested

for property crimes (Chi square = 71.34, df = 1, p,.0001), three and a half more likely to be arrested for drug-related crimes (Chi square = 70.17, df = 1, p<.0001), and three and a half times more likely to be arrested for disorderly behavior (Chi square 70.09, df = 1, p<.0001) than the control group, which is more in line with the generalized deviance hypothesis than the graduation hypothesis. Graduation from animal abuse to violent crime was not supported by an analysis of the sequence of crimes; animal abuse was no more likely to precede than follow violent crimes (Chi square = 1.42, df = 1, p>.05) or nonviolent crimes (Chi square = 2.66, df =1, p>.05).

Arluke, Levin, Luke and Ascione (1999) do not look at childhood acts of animal cruelty—Massachusetts juvenile records are sealed—only those in late adolescence and adulthood. However, the authors postulate that if graduation from animal abuse to violent crimes is not supported in adulthood, then most likely is not supported for children either. While the authors do not support the graduation hypothesis, instead favoring the generalized deviance model, they do advocate for attention toward animal cruelty as a red flag of potential anti-social behaviors. They also encourage future research that investigates the differences between animal abusers that do progress to violent crimes, like the serial killers described in Wright and Hensley (2003).

Based on 1935 case reports out of 13,000 court psychiatric clinic reports gathered between 1969 and 1975 and consisting of 1525 offenders, Heller, Ehrlich, and Lester (1984) attempted to link the symptoms of childhood fire setting, enuresis, and animal cruelty to whether the crime committed as an adult was violent (murder, rape, aggravated assault, robbery, assault, or arson) and the decision that the offender was competent to stand trial. Animal cruelty was the only variable found to differentiate between those charged with violent crimes and those charged

with non-violent crimes (Chi square = 9.58, df = 1, p <.01). Animal cruelty was not found to be significant in the decision of competence to stand trial. While not the primary focus of this study, which was trying to link all three behaviors—enuresis, fire setting, and animal cruelty—it once again links childhood animal cruelty with aggression because animal cruelty was significantly related to violent crimes. This study also illustrates the connection between animal cruelty and fire setting, a dangerous behavior that most people can agree indicates a need for intervention.

Sex Offenders

While sex crimes may differ in a variety of ways from other crimes, there can be similarities in the offenders' behaviors and histories. Tingle, Barnard, Robbins, Newman, and Hutchinson (1986) found aggression to be a factor in their study of childhood and adolescent characteristics of 21 rapists and 43 child molesters at the North Florida Evaluation and Treatment Center, which were consecutive admissions over a 21-month period. Rapists were defined as men who had been found guilty of a violent sexual crime such as sexual battery or attempted sexual battery. Child molesters were those who had been found guilty of a nonviolent sexual crime against minors less than 16 years of age. Information was gathered in structured interviews by a psychiatric resident within two weeks of admission.

The researchers compared the two groups in terms of family characteristics, relationships with family members and significant others, and problems with the educational system and the law using frequencies, Chi-square, and Fischer's exact tests. The groups were similar in their demographics, and reported approximately equally high rates of family violence, sexual abuse, and parental alcoholism in their childhoods. However, differences appeared between the two groups of offenders when examining early aggressive behaviors. Rapists had higher rates of

aggressive behaviors than child molesters, including cruelty to animals (47.6% vs. 27.9%). Other aggressive behaviors included fighting, property destruction, and fire setting.

The sex offenders in this study were participants in a voluntary treatment program, and therefore may not be representative of sex offenders in the general population. While authors indicate that a structured interview format was utilized, no instrument was named so it is not possible to evaluate the quality of the questions posed. While the researchers compared two types of sex offenders, there was not a non-sex offender group with which to make comparisons. Lastly, self-reports are susceptible to a variety of threats, including social desirability bias. However, the authors argue that there was no potential benefit or harm to the participants based upon their responses.

Simons, Wurtele, and Durham (2008) found similar results to Tingle, et al (1986) in their comparison of developmental experiences of a convenience sample of 137 rapists and 132 child sexual abusers in the Colorado Department of Corrections (CDOC) between March 2003 and March 2004. Fifty seven offenders in the CDOC receiving treatment for developmental disabilities and chronic mental illness were excluded from the study due to the sensitive nature of the study topic and the required comprehensive assessment. Of the available population, five offenders refused to participate. Six offenders were excluded due to significant age crossover of victims, meaning they assaulted both adults and children instead of one or the other. Like in Tingle, et al (1986), rapists and child molesters did not differ significantly in age or education. However, post hoc chi-square analyses showed that child sexual abusers were more likely to be divorced, while rapists were more likely to be single.

Criminal histories were obtained from the Pre-sentence Investigative Report, which is an official report used by the Colorado justice system to determine sentencing. It contains

information gathered from interviews, police reports, the National Crime Index Computer. The types of information available in this report include offender and victim demographics as well as the number and type of offenses.

The Redirecting Sexual Aggression Sexual History Disclosure Questionnaire was used to obtain information about the offenders' sexual development and offending history. This four-part, open-ended questionnaire was administered during treatment. Inter-rater reliability was found to be sufficient regarding the definitions of developmental experiences in the coding system (kappa ≥.76).

The Childhood Experiences Behavior Questionnaire (CEBQ) was developed specifically for this study by Simons. The CEBQ consists of 271 items designed to assess the frequency and severity of childhood experiences during a typical year of childhood. To assess violence, items were adapted from the Conflict Tactics Scales. Three scales were created to measure inter-adult violence, physical abuse, and emotional abuse respectively. Twenty items were included to assess for the severity and frequency of animal cruelty (10 items) as well as to assess for bestiality (10 items). The questionnaire refers to both pets and stray animals, providing definitions of each, and items about motivation were also included to insure that the behavior was intended as an act of animal cruelty.

Polygraph reports were obtained to confirm what the offenders had disclosed about their crimes. Lastly, the Balanced Inventory of Desirable Responding (BIDR) was administered to test for self-deceptive positivity, meaning the tendency to promote self-reports that while honest are positively biased, and for impression management, or the deliberate self-presentation to another. For the sample in the study, the two subscales demonstrated high internal consistencies (social deceptive positivity: alpha = .82; impression management: alpha = .85). The results indicated

that neither group of offenders displayed significant social desirability bias, and the scores on this scale did not correlate to any other variables.

In this study, more child sexual abusers reported being sexually abused as children (73%) than rapists (43%), and child sexual abusers reported they were significantly younger when the sexual abuse began compared to the rapists. However, rapists reported more frequent and more severe physical abuse than the child sexual abusers (68% vs. 56%, $p<.05$). Significantly more rapists than child sexual abusers also reported witnessing parental violence (78% vs. 42%, $p<.05$).

Like in Tingle et al, (1986), more rapists reported committing acts of animal cruelty when they were children than the child sexual abusers (68% vs. 44%, $p <. 01$). However, significantly more child sexual abusers indicated that they had committed acts of bestiality as children than rapists (38% vs. 11%, $p < .005$), which is consistent with findings in Ascione, Friedrich, Heath, and Hayashi (2003) which found that sexually abused children were more likely to commit sexual acts of cruelty on animals than children who were not sexually abused. The authors suggest that animal cruelty may serve as an indicator of future sexual offending in that animal cruelty behaviors began at an earlier age (12 years of age for bestiality, 10 years of age for other acts of cruelty) than the sexual offending behaviors (14 years for child sexual abusers, 16 years for rapists).

Like the sex offenders in Tingle, et al (1986), the offenders in Simons, et al (2008) were undergoing treatment. Specifically, the incarcerated men were undergoing intensive cognitive-behavioral therapy which encouraged full sexual disclosure. It is difficult to know how this treatment may cause the sample to differ from sex offenders that are not incarcerated and have not had any type of treatment. Additionally, like the previous study, this sample consisted of

male sex offenders, limiting the generalizability of the study to male sex offenders only. However, unlike in Tingle, et al (1986), the measurement of the variables in this study was done in a more sophisticated manner. Several instruments were used instead of a structured interview process, and could be used to confirm information gathered at different times. Additionally, unlike many studies, animal cruelty was assessed with 20 different items on the CEBQ, and severity, frequency and motivation of the acts were addressed. Lastly, the authors assess for social desirability bias which is always a potential weakness in self-report research, particularly about such taboo subjects, like bestiality.

In addition to their sex related crimes, some sex offenders are also killers. The term "sex killer" refers to an offender that engages in sexual acts with his/her victim before, during, or after killing the victim. Langevin (2003) compared 53 sex killers, 80 non-homicidal violent sexual offenders, 23 non-homicidal sadists, and a random group of 611 general sex offenders to determine if there are distinguishing characteristics between the groups which could potentially lead to the identification of sex killers before they commit homicide. All of the offenders were selected from a database of over 2,800 cases recorded since 1973.

Because the cases were spread over a wide timeline, all scales were not applied to all subjects. A variety of scales were used to measure sexual history and preference, substance abuse history, personality type, and intelligence. Medical histories, criminal records, and mental health information were also obtained.

Langevin (2003) found that sex killers and violent sex offenders were significantly younger at the time of their first offense. Almost 40% of sex killers had committed their first homicide before the age of 20, and their criminal careers had begun in childhood or adolescence. As children and adolescents, sex killers were also more likely than the other groups to have been

in reform/training school for delinquent, unmanageable, or incorrigible behavior; to display learning problems and neuropsychological impairment; to belong to a gang; to own a gun; to set fires; and, along with the sadistic group, were more likely to be cruel to animals. While the article did not provide any information about the home lives of the offenders, one can speculate based upon the previous information that family problems are also likely to have been present. The author suggests that these variables can be warning signs to clinicians, and that they should provide more intensive treatment and/or supervision to these "very disturbed children (p. 379)."

Comparatively, there were much smaller groups of sex killers and sadists than violent sex offenders and general sex offenders. However, according to the author, this is consistent with their proportions within the population of sex offenders. The wide variety of measurement tools used provided a plethora of information about the sample. The time span of offense is also a strength of the study, as it helps to control for history.

Murderers

Mead (1964) was the first to suggest a connection between childhood acts of animal cruelty and committing murder as an adult. Mead explains that each culture teaches its children which creatures may or may not be killed, and how. For example, in the dominant North American culture it is acceptable to kill a chicken for food, but the killing should be done mercifully; fish under a certain size must be thrown back; deer are only killed in particular seasons; and pets are to be cared for. These norms allow people to discern acceptable animals to kill, pests versus pets. Mead argues that children with poor impulse control and prone to acts of aggression lack this discernment. After a child violates these norms, according to Mead, and is not caught or if caught is not punished, that the child will be tempted to do it again and in bigger

ways. This progression of violence Mead suggests is now called the graduation or escalation hypothesis.

Wright and Hensley (2003) explore the potential link between childhood animal cruelty and serial murder in adulthood via the graduation hypothesis. As previously mentioned the graduation, or escalation, hypothesis states "that the presence of cruelty to animals at one developmental period predicts interpersonal violence at a later developmental period (Ascione & Lockwood, 2001, p.40)," or, more basically, that the killing of animals will progress to violence toward, and potential killing of, people.

The authors used case study analysis on five different serial murderers known to have committed acts of animal cruelty during childhood to support the graduation hypothesis. Carroll Edward Cole was charged with 16 murders based on the number of bodies that were found; the exact number of women he killed is unknown. Jeffery Lionel Dahmer, who raped, murdered, mutilated, and ate 16 people. At age 15, Edmund Emil Kemper III killed his grandparents. After being released from a mental institution at the age of 21, Kemper went on to murder eight more people, including his mother. The fourth serial killer, Henry Lee Lucas, confessed to stabbing and mutilating dozens of women all around the United States. While it is unknown exactly how many women he killed, law enforcement claimed that they had evidence he was the killer of 69 victims. The last serial killer reviewed in this article, Arthur Shawcross, sexually assaulted and mutilated 11 people. Out of all of the known serial killers, these five men were largely selected due to the amount of information available about them.

Common themes of childhood physical and sexual abuse and humiliation inflicted by their parents were found, as well as the tendency to turn to hurting animals as a way to vent their frustrations. Additionally, the acts (e.g., strangling, mutilation, etc.) these men did to animals as

children were very similar to those they performed on their human victims when they got older. While compelling, this study is limited, first by the nature of serial killer research. It is often difficult to gain substantial information about serial killers because most are incarcerated or deceased. Secondly, the qualitative nature of case analysis prevents a definitive statement about the relationship between animal cruelty during childhood and serial murder in adulthood. Lastly, because these men were selected because of the availability of information about them, it is possible that there are significant differences between them and serial killers whose information is not easily obtained.

While it is not possible to make causal inferences about committing acts of animal cruelty leading to criminal acts as an adult based upon these studies, they do reveal an interesting pattern. These studies have all shown that, to one degree or another, that many people who are in prison— particularly for violent crimes— have a history of childhood physical abuse, sexual abuse, and committing acts of animal cruelty. It may be useful in the future for researchers to develop longitudinal studies in which they follow children who have been identified as experiencing child abuse and committing acts of animal cruelty, apply interventions to counteract these experiences, and eventually compare the outcomes of these now adults to results of some of these inmate studies.

Intimate Partner Violence and Animal Abuse

This section includes research studies of adult survivors' experiences of intimate partner violence and animal abuse. Studies regarding the sheltering of survivors and their animals, models for assisting domestic violence survivors, and the types of injuries sustained by animals in domestic violence situations have not been included. Articles focusing on children who have

been exposed to domestic violence and animal abuse were included in the previous section regarding children and animal abuse.

While the link between human and animal violence has been acknowledged for decades, it is only within the last 30 years or so that several studies regarding the connection between domestic violence and animal abuse have been published. Surveys of women in domestic violence shelters across the country have been conducted regarding if the women had pets, if their pets had been threatened, harmed, or killed, and if their companion animals influenced the women's decision to leave the abusive situation. Using an early version of the Battered Partner Shelter Survey to interview 38 women in a Utah domestic violence shelter, Ascione (1998) found that of the women who owned companion animals, 71% reported that their batterer threatened to harm their pet, including threats to "put a kitten in a blender, bury a cat up to its head and 'mow' it, starve a dog, and shoot and kill a cat (p. 7)." Fifty-seven percent of the respondents reported that the batterer had actually harmed their animal, some by acts of omission (e.g., not feeding the animal, not allowing veterinary care) but most through violent acts including setting the animal on fire, shooting, slapping, shaking, throwing, and drowning. Eighteen percent of the women who owned pets delayed seeking shelter out of concern for the safety of their pets. While the small sample size does not allow for generalization, the study does show the intense violence and threats of violence towards animals that can occur in violence intimate partner relationships.

A similar study was conducted in South Carolina. The author surveyed 107 women who entered a domestic violence shelter between March and August of 1998 using a nine term questionnaire regarding their experiences with pets. The sample consisted mostly of White

women (59.8%), followed by 36.5% Black women, 2.8% Hispanic, and 1.9% Asian. Ages ranged from 17 to 61 years with a mean of 32.4 years.

About 40% of the sample reported currently owning pets or owning them at some point during the abusive relationship. Of the 43 women who reported owning animals, 20 (46.5%) of them reported threats or actual harm of their animals, with 9 women reporting that their abuser had only threatened their animals and 11 reporting actual harm. Unlike the Ascione (1998) study, none of the women reported that their partner had killed their animals. However, like the Ascione (1998) study, 8 of the women delayed seeking shelter due to concern about their pet's safety and five of the eight women delayed for more than two months (Flynn, 2000a).

Flynn (2000a) also found that approximately three-fourths of the pet owning women found their animals to be either very important (46.3%) or somewhat important (26.8%) as emotional support in dealing with their abusive situations. The companion animals were more likely to be reported as "very important sources of emotional support" for women without children, and "women whose pets were abused indicated stronger emotional attachment to their pets than women who did not report pet abuse" (Flynn, 2000a, p.169), which can help explain why the women would delay leaving a dangerous living situation because of a companion animal. This study found similar results to Ascione (1998) using a sample size twice that of Ascione (1998) and in a different region of the country, which offers support to the notion that animal abuse is a concern in many domestic violence situations.

Flynn (2000b) went into more depth about companion animal abuse in domestic violence situations by conducting 10 qualitative semi-structured interviews, each lasting approximately one hour. While the study was conducted at the same domestic violence shelter as Flynn (2000a), all the participants except for one were not present at the shelter during the previous

study. The interviews focused on the nature of the animal abuse and how the abuser used it to control, hurt, or intimidate the participant, and the relationship between the women and their animals, specifically the emotional role the animals played. The women ranged in age from 22 to 47 years old, and 80% of them were White. Nine of the women were unemployed, and several were on disability. Seven of the ten women interviewed had children.

A vast majority of the women described their animals as "family members", many of them as "children" or "babies" (p.106). Like in the previous studies, 8 of the 10 women interviewed had pets that were threatened or harmed by male partners. Seven of those eight had animals that were actually harmed, including physical, sexual, and psychological abuse and in on instance, death (p.107). Flynn (2000b) states that while not all of Adams (1995) reasons as to why abusers hurt animals came to light in this study, "it became clear that controlling these women by hurting, terrorizing, and intimidating them was a primary purple of males' animal abuse (p.109)." The interviews also revealed that the companion animals would often serve as comforters and protectors for the women, and have intense physiological reactions to witnessing domestic violence incidents. Also like the previous studies, 4 of the10 women delayed leaving their abusive relationships due to worry about their animals. While some of the women were able to find other caretakers for their animals, three animals were left with the abusers, which caused a great deal of concern for those women. And, unfortunately, while these women valued their animals, they expressed concerns about whether they would be able to get them back, often due to being able to afford a living situation that allows animals. While a small sample, the in depth nature of these qualitative interviews reveals in detail how the animal abuse is occurring during these relationships as well as the emotional impact that it has.

Faver and Strand (2003) conducted similar research with participants from six different domestic violence shelters—two rural, four urban—in a southeastern state. In addition to demographic questions, three questions from Ascione's (2000) Domestic Violence Pet Abuse Survey were used: "1. Has your partner ever threatened to hurt or ill one of your pets? 2. Has your partner ever actually hurt or killed one of your pets? 3. Does concern over your pet's welfare affect your decision making about staying with or leaving your partner? (p.1372)." Sixty-one women partially or fully completed the survey, and 50 of these women had owned pets in the past 12 months. However, only 41 of the pet owning women provided complete questionnaires and therefore the authors focused on those respondents.

As previously mentioned, participants were recruited from battered women's shelters in both rural and urban areas. Of the 41 women included in the sample, 41.5% were from the rural area and 58.5% were from the urban. There were no statistical differences on age, number of children, marriage, completion of high school, or race between the urban and rural groups.

Of the 41 women, 48.8% reported that their pet had been threatened by their abuser, 46.3% reported that their pet had been harmed, and 26.8% reported that concern for the welfare of their pets affected their decision to leave or stay with their abuser. While not found to be statistically significant, a higher proportion of rural women reported concern for their pet affected their decision making than urban women (41.2% vs.16.7%), perhaps suggesting that being more geographically isolated may influence attachment to the animals. Like the previously discussed studies, Faver and Strand (2003) does have a small sample size. However, the authors found similar results to the previous studies with participants from multiple shelters and comparing urban to rural areas.

Strand and Faver (2005) was a similar study with some additional findings. Between May 2002 and July 2003, women entering two domestic violence shelters were invited to complete the Pet Abuse Survey, which consists of seven items and then additional demographic data. Out of 51 women who responded to the survey, 43 of them reported having pets while in the abusive relationship. Of those 43 women, 74% reported that their animals had been threatened, 52% reported their animals had been harmed, and14% reported their animals had been killed. Sixty-five percent of the pet owning women reported that concern for their pet's safety affected their decision to stay or leave the abusive situation. Of those women, 88% delayed seeking shelter and 17% of those delayed for more than two months. Like previous studies women without children were more likely to report that concern for pets affected their decision to leave than women with children (85% vs. 45%). However, unlike in other studies, three women reported that concern for their animals is what prompted them to leave the abusive situation. One woman said her batterer had "threatened to mutilate the animals", while another said she left because she was "in fear that he would hurt my dog" (p. 48). The last of the three reported that her abuser had attempted to poison her dog, which prompted her to leave. Again, while limited by its small sample size, Strand and Faver (2005) supports the findings of previous research while adding to the knowledge base regarding the influence of a domestic violence survivor's concern for their animals.

Simmons and Lehmann (2007) had a much larger sample size in their study of animal abuse within the context of controlling behaviors in violent intimate partner relationships. Participants for this study were 1, 283 women seeking who sought assistance at a domestic shelter in an urban area of Texas between 1998 and 2002. The authors measured animal abuse

using a 5-item, 5-point Likert subscale which ranged from “never” to “very frequently”. The items include:

- Threatened to hurt pet if I didn’t change
- Verbally abused pet in front of me.
- Hit a pet with objects when angry.
- Killed a pet.
- My children watched pets being hurt. (p. 1214)

These items were intended to represent a range of pet abuse behaviors, ranging from threats to actual death. The presence of animal abuse was turned into a dichotomous independent variable based on positive responses to any of the items. Severity was turned into a continuous subscale by adding the Likert-scale score of the five items.

To measure controlling behavior, the authors used the Checklist of Controlling Behaviors (CCB), which is an 84-item survey consisting of 10 subscales representing a spectrum of controlling behaviors: physical abuse, sexual abuse, male privilege, isolation, minimization and denying, blaming, intimidation, threats, emotional abuse, and economic abuse (p.1215). The CCB is a total sum score ranging from 84 to a high of 420, with higher scores indicating greater use of controlling behaviors.

Lastly, the authors measured five types of partner abuse, including physical abuse, emotional abuse, sexual abuse, stalking, and marital rape. Questions regarding these behaviors were included on the domestic violence shelter intake paperwork, except for marital rape which the author’s extrapolated from participants’ response to the statement that one’s partner has “physically forced me to have sexual intercourse” on the CCB Sex Abuse subscale (p.1215).

The authors used chi-square with Fisher's exact test and found that a significantly higher percentage of women who reported pet abuse also reported sexual violence, chi-square (1, N = 1,283) = 19.59, p = .000; marital rape, chi-square (1, N = 1,283) = 23.625, p = .000; emotional violence, chi-square (1, N = 1,283) = 6.730, p = .009; and stalking, chi-square (1, N = 1,283) = 10.539, p = .005. Significance was not met regarding pet abuse and physical violence. The authors speculate that this may be a related to a bias in the sample; physical abuse may not be a function of pet abuse in the relationship, but rather a main reason the women in the sample are seeking help. When it came to controlling behaviors, the authors found that women who reported animal abuse also had higher scores on the total CCB score, $t(281) = 11.62$, $p > .000$, as well as each individual subscale. Using Pearson's *r,* positive correlations between pet abuse and controlling behaviors were found, although the percentages of variance explained on each of the subscales was small, between .053 and .122.

Unlike previous studies, Simmons and Lehman (2007) has a large sample size that was gathered over several years. Additionally, it provides additional information about the differences in the types of abuse experienced when comparing violent relationships that do and do not include animal abuse.

There have also been studies on animal abuse in domestic violence situations done internationally. Allen, Gallagher, and Jones (2006) surveyed 23 women seeking services at three different domestic violence refuges in Ireland, 19 of whom were randomly selected and 4 who were identified by refuge staff. All of the women surveyed owned at least one pet at the time they experienced violence within the home. Thirteen of the 23 women said they had witnessed either threats or abuse of their animal, and 11 of the 23 indicated that their children had also witnessed these events. The forms of animal abuse reported included kicking, swinging the

animal by the tail, throwing, hitting, drowning, and burning with cigarettes. Five of the women reported that animals were neglected; they reported that their abuser would not allow them to feed the animals, while one reported the animals were denied exercise/to be let outside, and two reported their animals were denied shelter (p.173).

Unlike other studies, these researchers asked their participants to say what they thought the motivation behind the animal abuse was. Twelve of the thirteen women who experienced animal abuse said they "believed that their pets were used as a means of abuse and control over either themselves or their children (p.173)." The remaining woman left that answer blank. In addition to control, revenge and punishment for leaving was also a motivation cited. As in other studies, a proportion of the women—4 of the 13—reported delaying leaving their violent situation due to concern for their animals. Another unique feature of this study is that 10 of the 13 women reported that they did not feel they could discuss their fears for their animals with anyone. While this study does have a small sample, it confirms that the phenomenon of animal abuse occurring in domestic violence situations is not unique to the United States.

A more methodologically vigorous study was conducted in Australia. Volant, Johnson, Gullone, and Coleman (2008) recruited two groups of women for their study. The first group consisted of 102 women who were seeking services through 24 domestic violence services in the state of Victoria, Australia, while the second was a community convenience sample of 102 women who had not experienced domestic violence. To be included in either group, participants must have owned at least one pet during their current or most recent romantic relationship.

The authors conducted telephone surveys with each participant to collect basic demographic data, acts of animal abuse by partners, children or other family members; threats to abuse animals by partners and children; and whether children had witnessed either threats or acts

of animal abuse. Unlike other studies, the author's specified what definition of animal abuse they used; specifically Ascione's (1993, p. 228) definition of "socially unacceptable behavior that intentionally causes unnecessary pain, suffering, or distress to and/or death of animal." Interestingly, based on this definition, the authors chose to include only intentional acts of that caused pain or death, and excluded acts of neglect because the participants would have to make judgment calls about the other person's intent.

There were significant differences in the demographics of the two groups. Chi-square analysis showed that women in the non-domestic violence group were significantly more likely to be in a current relationship, be older, and have a higher level of education than the domestic violence group. The domestic violence group was found to have a significantly higher number of children compared to the non-domestic violence group.

The domestic violence group reported significantly higher rates of partner animal abuse than the non-domestic violence group (54.9% vs. 0%; chi-square (1, N = 204) = 70.75, $p<.01$). Kicking, hitting, and throwing were the most commonly reported acts of animal abuse reported. Partner threats of animal abuse were also significantly higher in the domestic violence group (46.0% vs. 5.8%; chi-square (1, N = 204) = 40.79, $p<.01$). Using a direct logistical regression analysis with group member ship as the dependent variable, and age, number of children, highest education level, relationship status, and partner threats of animal abuse as predictor variables, the authors found that the full model was statistically significant, chi-square (11, N = 204) = 213.01, $p<.001$), and that partner threats of animal abuse was a reliable predictor of group membership; the odds of a woman being in the domestic violence group was five times higher for women whose partner had threated to abuse pets (p.1287).

By using a comparison group with a large sample, Volant et al (2008) shows once again that animal abuse often does not happen on its own, which is consistent with the previous studies discussed that were conducted in the United States. However, the significant differences in the demographics of the two groups as well as not including acts of animal neglect may have affected the results.

Febres, Brasfield, Shorey, Elmquist, Ninnemann, Schonbrun, Themple, Recuprero, and Stuart (2014) approached this issue from a different angle. Instead of having a sample of women who had experienced animal abuse within their violent relationships, the authors chose to explore the prevalence of adulthood animal abuse among male perpetrators of intimate partner violence. The authors surveyed 307 men who had been arrested for domestic violence and court referred to Rhode Island Batterer Intervention Programs. The mean age for the sample was 33.1 years (SD = 10.2), and education was 12.1 years (SD = 2.0). Over 70% of the sample was White.

The authors assessed intimate partner violence perpetration within the past year using the Revised Conflict Tactics Scale (CTS2), specifically examining the Psychological Aggression and Physical Assault subscales. Animal abuse perpetration since the age of 18 was assessed using the Aggression Toward Animals Scale (ATAS) which asks participants to rate the frequencies with which they have threatened and/or physically harmed an animal. The authors subdivided the ATAS items into three different subscales: neglect, threat, and physical assault. Antisocial personality traits were assessed using the ASPD subscale of the Personality Diagnostic Questionnaire-4, which also includes animal abuse before the age of 15. The authors also assessed alcohol use using the 10 item Alcohol Use Disorders Identification Test which is used to evaluate the frequency and quantity of a person's drinking, drinking intensity, symptoms of

tolerance and dependence, and negative consequences related to alcohol in the past year (p.1064).

Results showed that 125 of the 307 men (41%) reported committing at least one act of animal abuse since the age of 18, with the average being 9.52 acts (SD = 13.02). Physical abuse was reported with the highest prevalence and frequency, followed by threats and neglect. Psychological and physical intimate partner violence, antisocial traits, alcohol use, total adulthood animal abuse, and physical animal abuse were all significantly positively correlated with each other (p.1065). However, regression analysis did not show that adulthood animal abuse predicted intimate partner violence perpetration above and beyond antisocial personality traits and alcohol use, although it was significantly associated with psychological aggression and physical assault. The authors suggest that these results suggest that researchers focus on animal abuse throughout the lifespan, instead of focusing on perpetration only in childhood as many of the studies discussed in the "Children and Animal Abuse" section do. While this study does not specifically look at animal abuse occurring during or as a part of a violent relationship, it does support the premise that different types of violence are often a part of a person's system.

Elder Abuse and Animal Abuse

While there is quite a bit of literature documenting the connections between child maltreatment and animal abuse as well as intimate partner violence and animal abuse, empirical research is lacking when it comes to elder abuse and animal abuse. While there are articles with anecdotes and recommendations to those that work with older adults available (Rosen, 1995), only two research studies that addressed the topic could be found.

Peak, Ascione, and Doney (2012) seek to address this lack of research by first determining what information is being collected about elder abuse and animal abuse by Adult

Protective Services agencies across the United States in order to develop an assessment protocol that can be implemented across the country. As a first step of developing that assessment protocol, the authors conducted a brief telephone survey with APS agencies in each of the 50 states to determine what, if any, questions APS case managers ask about pets during their interactions with or about older adults. Out of 50 APS agencies, 41 responded. Of those 41 states, 19 (46.3%) APS agencies stated that they ask if pets are present in the home when screening for elder abuse, with 14 (73.7%) of those asking about the kind and number of animals in the home. Five states (12.2%) reported that they ask questions about pet abuse and/or animal welfare in general. One state includes three questions specifically related to animal abuse as a part of elder abuse:

- Do you think you partner/child is using your love of your pet to control you?
- Are you with an individual who is abusing you/harming your pet?
- If you wanted to leave, how can you/we make sure your animal is safe during your leaving? (Peak, et al., 2012, p. 44)

Seven states (17.1%) reported that they ask if the elder adult has any pet welfare issues such as not being able to afford veterinary care, whether they can exercise the animal, if they have a hard time controlling the pet, etc.

The study also included qualitative responses beyond the yes/no questions of the telephone survey. Several states (no exact number given) reported that while asking about animal abuse is not a part of the official intake or assessment, APS case managers are free to bring it up if they observe it. However, one state respondent did say that animal abuse alone would not be noted unless it was specifically connected to abuse or exploitation of an elder (p.45). The qualitative responses revealed that neglect was a common concern when it came to animals

owned by older adults: inability to manage pet care; spending money on the animals instead of themselves; and the lack of a safe space for pets in case of an emergency (p.45).

While Peak, et al (2012) shows what the APS agencies are asking—or not asking, as the case may be— it does not necessarily reflect what APS workers are seeing in the field. Six APS case managers from a mid-western state volunteered to be interviewed about their experiences with clients who had pets in a study by Boat and Knight (2000). While initial discussion was open ended, probe questions were asked to garner information on a variety of topics including neglect, attachments and loss, safety and health issues, harm and threats of harm, animal hoarding, and encounters with aggressive animals (p.148).

The topic of shared environments was common among the case managers' experiences; whatever is going on for the older person is reflected in the circumstances of the person's animals. Neglect was the most common concern, whether the elder was neglecting the animal, often due to the inability to care for the animal because of physical or mental limitations; the elder was neglecting him/herself in favor of the animal, i.e., buying food for the animal instead of food or medication for him/herself; or there was neglect of both self and the animal, again due to physical and/or mental limitations.

While these case managers had not had much experience with animal abuse situations among their clients, the experiences they did have were intense. One example given was that an alcoholic client killed his wife's dog while in a rage and then told her to go look for the dog in the garbage can (p. 150-151), while another included a client who lived with an abusive son but refused to leave out of fear that her son would kill her cats (p.151).

The case managers who were interviewed made recommendations that case managers working with the elderly include questions about companion animals in their intakes and

assessments. They also suggested that APS case managers receive training about assisting clients who have pets.

Discussion of the Literature

Several limitations are present in this body of research. From the literature review, it shows that majority of the studies in this field are descriptive studies with surveys (Baldry, 2003; Duncan, Thomas, and Miller , 2005; Dadds, Whiting, and Hawes, 2006; Ascione, Friedrich, Heath, and Hayashi, 2003; Currie, 2006; McEwen, Moffitt, and Arsenault, 2013; Ascione, Weber, and Wood, 1997; Ascione, Weber, Thompson, Heath, Maruyama, and Hayashi, 2007; Flynn, 1999; DeGue and DiLillo, 2009; Henry, 2006; Henry, 2004; Baldry, 2005; Gullone and Robertson, 2008; Fleming, Jory, and Burton, 2002) , case file review (Tapia, 1971; McClellan, Adams, McCurry, and Storck, 1995; Felthous, 1980; Duffield, Hassiotis, and Vizard, 1998; Slavkin, 2001; Sendi and Blomgren, 1975; Lewis, Shanok, Grant, and Ritvo, 1983; Arluke, Levin, Luke, and Ascione, 1999) , and case studies (DiViney, Dickert, and Lockwood, 1983; Wax and Haddox 1974a, 1974b; Verlinden, Hersen, and Thomas, 2000; Wright and Hensley, 2003) being the most common research designs. Experimental designs are not possible in this field due to ethical considerations; a person or animal cannot be abused for the sake of research. Therefore, the most sophisticated study designs in this area are those in which a comparison group is used, most often a sample of university students or a matched community sample.

The most common limitation throughout this body of literature is retrospective recall. A vast majority of the studies involve asking adults to remember things that happened when they were children (Flynn, 1999; Henry and Sanders, 2007; Kellert and Felthous, 1985; Miller and Knutson, 1997; Tingle, Barnard, Robbins, Newman, and Hutchinson, 1986; Simons, Wurtele, and Durham, 2008), or mothers/caretakers interviewed about things their children have done in

the past (Currie, 2006; McEwe, Moffitt, and Aresenault, 2013; Ascione, Weber, and Wood, 2007). Due to retrospective recall, events that occurred in childhood may be downplayed, or potentially exaggerated over time, or even forgotten, and therefore affect the reporting rates on any of the variables. With the exception of Febres, et al (2014) which surveyed batterers, the studies of domestic violence and animal abuse rely solely on the recall of the domestic violence survivors, not the perpetrator or any type of official reports.

Social desirability bias may also impact the prevalence rates of abuses investigated in this body of literature. Many of the topics of these studies could be considered taboo or undesirable, meaning that participants may not want to admit to abusing an animal, or being a bully as a child. Being a victim of abuse may also be embarrassing to participants, so reporting rates of victimization may be low. In the case of the domestic violence literature, it is possible that participants may want to make their abuser look bad or perhaps the opposite, minimize what happened in order to justify leaving their animals with the abuser when they sought shelter.

Sampling is another limitation of this body of literature. Overall, many of the studies have small samples, which limit the statistical power and the generalizability of the results. Two studies with large samples, McClellan, Adams, Douglas, McCurry, and Storck (1995) and Ascione, Friedrich, Heath, and Hayashi (2003), rely on file reviews, which are contingent upon the accuracy and completeness of the documentation. Sampling is also an issue because almost all of these studies use convenience samples of special populations: university students, psychiatric patients, or inmates. For example, DeGue and DeLillo (2009) had a large sample, but it was a convenience sample of university students (n= 860). In the domestic violence literature, Simmons and Lehmann (2007) had a sample of over 1,200 women but it was a convenience sample of women seeking services at one particular service provider. Additionally,

a majority of the studies consist of samples of women who have sought shelter and/or services for domestic violence, which does not allow for generalization to women in domestic violence situations who do not or cannot seek help. When it comes to the literature on elder abuse and animal abuse, the samples are not only small, but also are only with Adult Protective Services employees, not the older adults or the abusers.

Measurement is another complication in this body of research. While all of these studies involve common constructs—animal abuse, child abuse, domestic violence, elder abuse, bullying, criminal behavior—the constructs are measured in different ways in different studies. For example, studies that use the Child Behavior Checklist to assess for childhood animal abuse are basing that variable on one item on the questionnaire, the meaning of which is left to the interpretation of the respondent. Even scales specifically designed to assess animal abuse, such as the BIARE and the PET Scale, include different items that result in different prevalence rates, as discussed in the literature review. Additionally, while many of the instruments developed to assess for childhood animal cruelty have been tested for reliability, they have not gone through validity testing. A majority of the domestic violence literature involve questionnaires with very general questions such as "did your abuser ever harm your animal?" which leaves the term open to interpretation. Volant, et al (2008) excluded acts of neglect as acts of abuse, unlike other studies, which may have affected their results. What little research there is on elder abuse and animal abuse relies heavily on qualitative data. Peak, Ascione, and Doney, (2012) showed that less than half of the Adult Protective Service agencies in the U.S. assess for animal abuse during elder abuse investigations, and among those states, how and to what extent they assess varies greatly.

However, despite the limitations—sampling issues, different measures, and biases—the literature appears to point in one direction; that animal abuse does not occur in a vacuum. Instead, animal abuse tends to appear among other types of violence and antisocial behaviors, including child maltreatment, intimate partner violence, and elder abuse. Therefore, it is reasonable to assume that if an animal welfare professional is investigating an alleged case of animal abuse that the professional may also encounter maltreatment that is occurring to people, pointing to the need for this study.

Chapter 3: Methods

Introduction and Research Hypotheses

The current exploratory study uses an online survey to gather information about the state of cross-reporting of different types of family violence from the perspective of people in animal welfare fields. To accomplish this objective, the online survey addresses the types of maltreatment witnessed or observed by the participants while at work, how they are addressing the situations they are seeing, and what factors influenced their response.

It is hypothesized that:

- People in different types of animal welfare positions will encounter different types of abusive situations, and;
- People who received training regarding child maltreatment, intimate partner violence, and/or elder maltreatment will be more likely to report those situations to law enforcement or protective services than those who did not receive training, and;
- People who believe they live in areas where there are resources for people in these situations will be more likely to make a report than those who do not believe they live an area with resources.

Design

The current study consists of a self-administered online survey created with Qualtrics. Qualtrics is an online survey software program that allows the user to develop surveys within a web browser, collect data, and then either create reports within the Qualtrics platform, or export the dataset to analyze with other statistical software. The Qualtrics system is user friendly, and allows routing of questions based on answers, therefore presenting the participant only with questions that apply to him/her, making completing the survey as efficient as possible.

The online survey format has several advantages. First, it is cost effective. The Qualtrics software has been made available at no cost to graduate students, faculty, and staff at the University of Tennessee. Second, the survey can be distributed to a large number of people very quickly, creating the potential for a large sample size. Lastly, the data is collected online and can be easily exported as a useable data set in statistical analysis software. In this case, it was exported to IBM's SPSS 23.

Like all survey methods, there are also limitations to the online survey delivery method. While the survey may reach a large number of people, it does not necessarily mean they will complete it. Since the survey will be asking about events that happened within the past year, recall bias is a concern. As with all self-report methods, social desirability bias may be a problem. Respondents may want to present themselves in the best light possible and therefore may report that they responded to situations in a particular way when in actuality they did not. In order to address this potential concern, the questions on the survey are worded as neutrally as possible and a wide variety of responses to encountering a family violence situation are presented. Additionally, no identifying information was connected to survey responses ensuring anonymity. Lastly, as this is an online survey, it is limited to people with internet access. While most animal shelters, veterinary clinics, and rescue groups have some type of online presence, it is not guaranteed that all employees or volunteers have internet access, and may not feel comfortable filling the survey out at work. Unfortunately there is no way of knowing if these people are significantly different from the people who completed the survey.

Instrument

As this is a new area of research, it was necessary to create a new measurement tool. As previously stated, there were three areas to be assessed in this study: the types of maltreatment

witnessed or observed by the participants while at work, how they are addressing the situations they are seeing, and what factors influenced their response. In order to assess the types of maltreatment observed, the survey asked questions about child maltreatment, intimate partner violence, and the abuse of elders/vulnerable adults using warning signs listed in publicly available instruments. The complete list of the survey questions may be found in Appendix 6.

Eligibility Questions

Two questions are asked to determine if a participant is eligible for the study. First, to be eligible for this study, the participant must currently work or volunteer in an animal related position. This is presented as a dichotomous yes/no question. Next, participants must have contact with animal owners as a part of their position since this survey seeks to determine what type of maltreatment to people these animal welfare professionals encounter while working; if they do not have contact with animal owners, they would not necessarily be in a position to see any family violence or maltreatment. Again, this question is presented as a yes or no response.

Individual Position

Once participants have indicated that they are eligible for the survey, they are asked questions about their specific position. As previously mentioned, animal welfare is a diverse field. Participants are asked to indicate their job title and how long they have been in their current position. Information is collected about whether they are involved in investigating animal abuse cases, whether their position requires them to make home visits, and whether they have had training in responding to family violence situations.

Organizational Information

While the questions in the previous section ask participants about their individual positions, this section gathers information about the organization as a whole. These questions

include: whether the organization is a public (government) or private; non-profit or for profit; the estimated budget of the organization; and how many employees and volunteers the organization has. Additionally, questions regarding organizational policies about documentation and reporting are asked. These questions are all presented in a multiple choice format.

Types of Maltreatment and Frequency

In the child maltreatment section of the survey, participants were asked if in the past 12 months they have been concerned for the safety or well-being of a child or children they have seen while working. If the answer is "no", the participant is moved to the next section of the survey. If the answer is "yes", the participant is then asked how often they have encountered situations like this, responding on a scale from "daily" to "once or twice a year". Next, participants are asked to think of the most recent situation in which they were concerned for a child or children, and to indicate why they were concerned. They are then provided a list of observable warning signs of child physical abuse and neglect listed by the Mayo Clinic (2012) and by Prevent Child Abuse New Jersey (2015). These sources were selected because they provided observable warning signs of child maltreatment that were easy for a layperson to understand and came from reliable and respected organizations in the field. Participants may check all that apply.

In a very similar format to the child maltreatment variables, participants are then asked if while on the job in the past 12 months, they have encountered situations where they suspected there were adult partners who were violent toward each other. If yes, they are asked how frequently they encountered this type of situation. Just as when they were asked about children, participants are then asked to recall the most recent incident of suspected violent adult partners, and asked to identify from a checklist why they thought the partners were violent. This checklist

of observable behaviors has been adapted from the Severity of Violence Against Women Scale (Marshall, 1992) as republished by the Centers for Disease Control (Thompson, 2006). Internal consistency for this scale was reported as .92 to .96 for female college students and .89 to .96 for community women (Thomspon, 2006, p.6). While this scale is intended to be used in assessing violence toward women, it was selected for this study because provides a list of 46 behaviors that could occur in any violent intimate partner relationship, a majority of which could be observed by an outsider. If the participants indicate they have not encountered intimate partner violence in the past year, they will move on to questions about maltreatment of elders and/or otherwise vulnerable adults.

There are three areas of concern when it comes to elder abuse: self-neglect, abuse by a caretaker, and neglect by a caretaker. As in the previous sections, participants are asked if in the past 12 months they have been concerned for the safety or well-being of an elderly person and/or disabled adult they have seen while on the job. As with the previous two groups, participants are asked how frequently they encounter situations like this, and then asked to recall the most recent one and indicate a reason why they were concerned using a provided checklist. The options for this question were adapted from the Elder Assessment Instrument (Fulmer, 2003) and the Suspected Abuse Tool (Bass, Anetzberger, Ejaz, & Nagpaul, 2001). The Elder Assessment Instrument has been used since the 1980s. In a study of 501 elderly adults who presented in an emergency department, the EAI was reported to have an internal consistency reliability (Cronbach's alpha) of .84 and test/retest reliability was reported at .83 ($p < .0001$) (Fulmer, 2003). The EAI was selected because as in the previous sections, it provides a comprehensive list of warning signs of elder abuse that are observable and easy to understand. The Suspected Abuse Tool (Bass, Anetzberger, Ejaz, & Nagpaul, 2001) is a part of a decision tree model of

assessment for elder abuse that is not intended to stand alone. However, like the EAI, it provides a list of warning signs of suspected elder abuse, and the wording of the items was even more specific and easy to understand in some instances, which is necessary for the current study.

Response to Situations

In addition to knowing what kinds of situations people in animal welfare positions are encountering, this study also seeks to determine how they are responding to these situations and how they are coming to their decisions. For each type of maltreatment (child, intimate partner, elder) if they indicate "yes", participants are asked to recall the most recent incident they encountered and report how they responded to it. This is presented in a multiple choice format with options including trying to address the situation on their own, calling for emergency services (police, ambulance), making a report to protective services (for children and elders), or other. Once they have indicated how they responded to the situation, they are asked what influenced their decision making process. This question is multiple answer, with the options adapted from the results of studies of teachers (Crenshaw, Crenshaw, & Litchenberg, 1995) and physicians (Flaherty, et al, 2004) about their decisions to report suspected abuse. While both of these studies involve reporting of suspected child maltreatment, the wording of the options was adapted to fit the situations in the current study. Additionally, participants are asked if they feel that there are resources available for people in child maltreatment, intimate partner violence, and elder maltreatment situations, and if they personally feel confident in their abilities to handle these situations.

Demographic Information

Basic demographic information is collected, including gender, age, race, marital status, and education level. Participants are asked to write in their age in years, while the other questions are presented in a multiple choice format.

Sampling

Snowball sampling, a non-probability method of obtaining a sample, was used in this study. While not the ideal in research, self-selection was necessary due to the specific population of focus—people involved in animal related fields—and the fact that there is a not a singular centralized method of communication to all of the people in these fields. Without a comprehensive inventory of every individual in the population, probability sampling in which every individual has an equal chance of being selected is not possible. By utilizing a snowball sampling method in which participants are able to refer other participants whom they believe fit the criteria for the survey, it was more likely that the survey link would reach people in animal related fields that otherwise might not have been reached. Due to the lack of a clear population size and probability of an individual being selected, an acceptable sampling error could not be computed.

Participants

To be included in this study, individuals must have indicated that they are employed or volunteer in a position related to domestic animal health, welfare and/or control and have some contact with animal owners. These individuals can include animal control officers, animal police officers, animal shelter and animal rescue employees and volunteers, veterinarians, veterinary technologists and technicians, and others such as agricultural extension agents and humane officers in law enforcement.

Animal control workers are responsible for investigating allegations of animal mistreatment and the handling of abandoned, unattended and/or dangerous animals (BLS, 2016). Use and regulation of animal control officers varies greatly from state to state, and even within regions of the same state. For example, while the state of Tennessee is divided into 95 counties, there are only 66 certified animal control agencies across the state (see Figure 3). Additionally, while certification of animal control agencies are overseen by the Tennessee Department of Health, animal control and sheltering issues have been typically treated as a local issue and receive little to no state guidance (Tennessee Comptroller of the Treasury, 2008). While the state does not mandate specific training standards for animal control workers, the Animal Control Association of Tennessee (ACAT) encourages animal control officers to take courses through the National Animal Care & Control Association (NACA) to become nationally certified; however, as funding varies, so does the ability for the county to pay for these courses. Most animal welfare agencies require animal control officers to have a high school diploma or equivalent and a valid driver's license.

While animal control officers are responsible for going into the field to deal with animals, other workers care for animals in shelters and kennels. Shelter workers are responsible for feeding, watering, grooming, and handling the animals. They may be responsible for cleaning cages, keeping records of animal care, and handling animals being brought in and discharged.

In addition to animal control agencies, animal welfare is also addressed by a large number of animal rescues, which operate in a variety of ways. Some are non-profits with a physical address and paid employees, while others are networks of volunteers who foster animal in their homes. Like animal control agencies, although to an even greater degree, while bound by state law, there is no centralized monitoring or control over these groups, which makes

determining their scope and functionality difficult. According to a 2014 report by the Bureau of Labor Statistics about volunteer demographics nationally, women volunteer at a higher rate than men (28.3% vs 22.0%). Whites volunteer at a higher rate (26.7%) than other races, as do people ages 35 to 44 compared to other age groups (29.8%), and married people compared to those who have never been married (30.0% vs. 20.2%). Additionally people with high levels of education are more likely to volunteer; 39.4% of college graduates volunteer compared to 27.3% of people with some college or an associate's degree, 16.4% of high school graduates, and 8.8% of those with less than a high school education (Bureau of Labor Statistics, 2014).

In addition to the animal sheltering aspects of animal welfare, animal medicine is another facet of the field that broadly includes veterinarians, veterinary technicians, veterinary technologists, and veterinary assistants. Veterinarians tend to the health of non-human animals by diagnosing, treating, and researching medical issues that affect companion animals, livestock, and exotic animals. To become a veterinarian in the United States, an individual must earn a Doctorate of Veterinary Medicine (DVM) from an accredited college of veterinary medicine. In addition to successfully completing the DVM, veterinarians are also required to be licensed. Licensing requirements vary by state, but typically require passing the North American Veterinary Licensing Examination as well as a state examination. Veterinarians may also choose to specialize in any of the forty certifications offered by the American Veterinary Medical Association, which requires additional education, completion of a residency program, and further examinations. (BLS, 2014a)

Veterinary technologists and technicians assist in the diagnosis and treatment of illness and injuries in animals by conducting medical tests and administering medications under the supervision of a licensed veterinarian. Veterinary technologists typically have a bachelor's

degree in veterinary technology and are more likely to work in a research related positions. Regular responsibilities may include administering medications, preparing tissue samples, and recording medical information. In contrast, veterinary technicians usually have a two year associate's degree in veterinary technology and often work in private veterinary clinics. They may handle animals, assist with tests, and speak with veterinary clients about things like how to administer medications to their animals. Both veterinary technologists and veterinary technicians must pass the Veterinary Technician National Exam, as well as follow the state-level application requirements. (BLS, 2014b)

Most veterinary facilities also employ veterinary assistants. Veterinary assistants perform daily tasks in the veterinary setting such as working in the reception area, bathing animals, cleaning cages, restraining animals during procedures, assist in obtaining blood, urine, and stool samples, and monitoring of animals after surgery. Most veterinary assistant positions require a high school diploma and on-the-job training. While certification is not currently mandatory, there is an Approved Veterinary Assistant program offered by the National Association of Veterinary Technicians in America (NAVTA). To become an Approved Veterinary Assistant, a person must graduate from a NAVTA-approved training program, either on campus or online, and pass a proctored exam. (BLS, 2015 Dec).

Considering the wide variety of positions that work in some fashion with animal welfare, as well as the great differences related to geography across the country, it is reasonable to predict that there will be quite a bit of variation among participants in regards to education and training.

Institutional Review, Informed Consent, Confidentiality and Anonymity

The University of Tennessee, Knoxville Institutional Review Board (IRB) determined that this study was eligible for exempt review and that the study complies with the regulatory

requirements for the protection of human subjects (Appendix 3) before the survey was distributed.

Upon opening the survey link, participants are first presented with an informed consent page (Appendix 4). The informed consent statement provided details of the nature of the survey and identified the researcher and institutional affiliation. Furthermore, the informed consent statement informed participants that the survey should take less than thirty minutes to complete. Because of the natures of the material covered in this study, participants were provided with the Veterinary Social Work Helpline number in the event they need assistance coping with work related stress. Participants were encouraged to use secure networks while they completed the survey, and informed that no identifying information would be collected. Participants were also informed that the survey was voluntary, that they were free to stop at any time without penalty.

Survey Distribution

Once the survey instrument was developed, three volunteers were asked to go through the online survey to evaluate the ease of use, wording of questions, and to spot any problems or technical difficulties. The volunteers' answers were not recorded and are not a part of this study's results. Based upon the volunteers' feedback, minor typos were corrected and all of the fonts were changed to be the same type and size.

The survey was distributed using a combination of emails directly to animal welfare organizations, messages on animal welfare related listservs, and a variety of social media outlets including Facebook, Twitter, and LinkedIn.

The survey link was emailed with the recruitment message (Appendix 5) to 174 animal control agencies, humane societies, animal rescue groups, and spay-neuter clinics. The contact information for a majority of these organizations was obtained using the Companion Animal

Initiative of Tennessee's (n.d) county resources list and following the links provided to the individual organizations. Other organizations' contact information was found using the search feature on Petfinder.com. The message was also sent out on the UT Veterinary Social Work listserv, the Animal Care and Control of Tennessee listserv, and posted in the Human-Animal Studies Yahoo! group.

The survey was also posted by the author on at least 74 pages on Facebook. These pages included the University of Tennessee Veterinary Social Work page, the pages of various animal rescue groups, as well as animal related sites such as www.pet-abuse.com. The post received the most views on the University of Tennessee Veterinary Social Work page, where it reached 2,470 people and had 25 shares. The author created a post on her LinkedIn profile that received nine views, and she also sent the survey directly to fifteen people in her network that have connections to people in animal related fields. The survey link was posted on the author's Twitter feed, but it did not receive any retweets.

The survey was originally released on February 11, 2016 with the intention of keeping it open for three weeks. However, due to a lack of response, the survey remained active for additional time with several reminder posts being placed on the University of Tennessee Veterinary Social Work's Facebook page. The last recorded response was entered on May 30, 2016.

Data Analysis

The survey data was exported from Qualtrics and analyzed using IBM's SPSS 23. Frequencies and other descriptive statistics were obtained for the variables as appropriate. Due to the nature of the variables in this study, non-parametric statistical tests were used. Additional information about the statistical analyses performed is discussed in the results.

Chapter 4: Results

The percentage results presented in this chapter are the valid percentages, meaning that the missing cases have been excluded, and the number of respondents for each particular analysis has been reported. Hypothesis testing was conducted using Fisher's Exact Test. This test was selected because it appropriate for the level of measurement, and is appropriate for small sample sizes. An alpha $\leq .05$, two-tailed, was used throughout.

Sample Size and Demographics

Qualtrics recorded a total of 256 users that opened the survey. Of that total number, 253 of them agreed to the Informed Consent statement and chose to continue with the survey. In reply to the question "Do you currently work or volunteer in a position that involves animals?" 234 people said "yes", and were able to move on to the next question. Of those people, 216 indicated that they have contact with animal owners, therefore indicating that they meet the eligibility requirements for the study. However, while 216 indicated that they were eligible, not all 216 people answered all of the questions on the survey.

The vast majority of the respondents were female (91.5%, $n = 189$) and Caucasian (92.5%, $n = 188$) Please see Figure 4 and Figure 5 in Appendix 1. The mean age of the people who responded was 44.84 years ($n = 183$, $SD = 13.14$), with the minimum age reported as 19 years and the maximum being 73 years. Ninety-three percent of the respondents indicated that they live in the United States ($n = 214$). The most respondents, 30.4%, reported living in Tennessee, followed by Illinois and Ohio both at 7.5%, and New York at 5.1%. Most of the sample reported that they were married or in a domestic partnership (56.9%), followed by participants who reported being single, never married (25.0%) and those who reported being divorced (12.23%, $n = 188$); please see Table 2 in Appendix 2. In response to "what is the

highest level of education you have completed?", of the 188 people who answered, 17.55% reported that they had a high school diploma or GED, 15.96% reported they had an associate degree, 36.70% reported they had a bachelor's degree, 15.43% indicated they have a master's, 7.98% reported having a professional degree beyond a bachelor's degree (such as DVM), and 6.38% reported having a doctoral degree. This information may also be found in Table 1 in Appendix 2.

Individual Position

While the majority of the effort in distributing this survey was mostly directed towards people in animal control or animal sheltering/ rescue positions, the most commonly chosen response with 28.3% of the 212 participants who answered this question selected was "other" when asked to pick the title that best described their position. Some of the "other" positions that were written in were government employees, dog walkers and pet sitters, animal assisted therapy workers, people working in social service agencies, and one "animal communicator". Animal shelter or rescue volunteers were the next more common position at 24.5% of those who responded, followed by animal rescue employees at 11.3%. Eight percent indicated that they were city or county animal shelter employees. Veterinary professionals were also present in the sample: 7.5% of the participants were veterinarians, 4.7% of the sample reported being veterinary technicians, and 1.9% of the sample were veterinary assistants. Animal control officers made up 2.8% of the sample, along with humane officers at 4.6%. People who work in animal boarding, grooming, or training made up 6.1% of those who answered. Please see Table 4 in Appendix 2. About 44% of the 210 participants who answered this question had been in their position 5 years or less; however, about 10% of the sample reported being in their position 20 years or more.

The position data were aggregated into three broad categories to use in further analyses due to the small numbers of participants in several of the categories. Animal control officers, humane law enforcement officers, city/county shelter employees, animal rescue employees, and animal shelter/rescue volunteers were put together as participants involved in animal care and control and make up 51.4% of the participants. Veterinarians, veterinary technicians, veterinary technologists, and veterinary assistants were put together as participants involved in veterinary medicine and consist of 14.2% of the sample. Lastly, those who indicated they are involved in animal grooming, boarding, or training and those who marked "other" were combined to make up 34.4% of participants.

Approximately one-third (33.6%) of the 211 participants who answered this question indicated that they investigate allegations of animal abuse and neglect as a part of their position. Thirty-seven percent of 211 participants indicated that they do welfare checks on animals, while only 16.3% of 210 participants indicated that they respond to calls about nuisance animals.

As a part of their positions, 73.7% of 209 participants who responded indicated that they received training or continuing education. Of the 150 participants who received work related training, most of them indicated that the training was animal related, including training about animal behavior (79.3%), animal sheltering (60.7%), animal handling (77.3%), animal hoarding (38.7%), animal adoption policies and procedures (46%), animal laws and ordinances (58.0%) vaccinations (56.0%), and euthanasia (54.0%). While a similar number of participants had received training on compassion fatigue and burnout, 58.7%, many less received training about the issues related to maltreatment of people such as child abuse and neglect (26.0%), intimate partner violence or domestic violence (27.3%) or elder abuse and neglect (18.0%). Please see Table 5 in Appendix 2 for complete results about trainings received.

Organizational Information

As when asked to describe their individual positions, the most common answer when asked to describe where they work/volunteer was "other" at 24.4% of the 205 responses. Some of the write- in responses included a private counseling practice, a doggy daycare, and a Society for the Prevention of Cruelty to Animals. The next most common response at 23.4% of the responses was that the participants work/volunteer at animal rescue that has a physical building in which to house animals. Nineteen percent of the sample indicated that they worked in a veterinary hospital or clinic, and 18% identified their workplace as a city or county animal shelter. Animal rescues that use a network of foster homes made up 14.6% of the sample, and lastly law enforcement agencies made up 0.5% of the responses.

Almost a quarter of the 204 participants who responded to this question (23.5%) indicated that their organization is made up strictly of volunteers, and almost another quarter of the sample (23.0%) indicated their organization had 1 to 5 employees. Organizations with 6 to 15 employees made up 19.1% of the sample, while organizations with 16 to 30 employees were only 7.4% of the sample. Slightly over ten percent (10.3%) of participants said their organizations had 31 to 50 employees, and the remaining 16.7% of participants' organizations had 51employees or more.

A similar breakdown was found when participants were asked about the number of volunteers their organizations have. While 4.4% said they did not know or were unsure, 28.6% of the participants said that their organization had 51 or more volunteers (n = 203). However, 18.2% said that their organization did not have any volunteers. The rest of the participants' organizations fell somewhere in between with 13.8% having 1 to 5 volunteers, 15.8% having 6 to

15 volunteers, 11.3% having 16 to 30 volunteers, and 7.0% having 31 to 50 volunteers. Please see Figure 6 in Appendix 1.

Participants seemed to be less clear about their organization's yearly budgets, with 31% of 203 respondents indicating that they did not know or were unsure about how much money was in their organization's budget. The next most common response at 25.6% was organizations with budgets over $500,000. The $250,001 to $500,000 was the next most commonly reported at 9.4%, followed by $100,001 to $250,000 at 8.9%. Almost 8% had budgets of less than $10,000, while 6.4% reported budgets of $25.001 to $50,000, 5.9% had budgets of $50,001 to $100,000 and 4.9% reported a budget of $10,001 to $25,000.

When asked if their organizations have policies regarding making reports to other agencies such as law enforcement, child protective services, or adult protective services, 48.0% of 202 participants indicated that their organization did have these policies while 33.7% indicated that they did not. Almost one-fifth (18.3%) indicated that they did not know or were unsure if their organization had reporting policies.

Similar results were found in response to the question "does your organization require employees/volunteers to document situations they encounter while on the job?" with 64.5% indicating that their organization does have documentation policies, 27.5% saying that their organization does not have documentation policies, and 8% did not know or were unsure, out of 200 respondents. Of those who said their organizations have documentation policies, 64.6% of them also stated that they are required to document each case they deal with, 40.9% said they document if law enforcement was involved, and 40.9% said they document if someone was injured. Other situations, which were about 5.5% of respondents, included "on as needed basis" and "document situations out of the ordinary." It is important to note that since there may be

participants that are employed or volunteer at the same agency, these results are more a reflection of the participants' awareness of their organization's structure and policies than on a number of organizations that have these characteristics.

Prevalence of Concern

A summary of the prevalence of concern for child maltreatment, domestic violence, and maltreatment of vulnerable adults may be found in Table 7 in Appendix 2. A comparison of how often participants reported facing these concerns may be found in Figure 7 in Appendix 1.

Out of 198 people, 106 of them (53.5%) of them indicated that they had not been concerned about any type of family violence in the past twelve months. Forty-eight people, or 24.2%%, indicated they had been concerned about one type of family violence. Thirty-two participants, 16.2%, said they had been concerned about two types of family violence, while twelve participants, or 6.1%, had been concerned about all three types of family violence in the past twelve months.

Child Maltreatment

Participants were asked to recall if in the past twelve months they have been concerned about the safety or well-being of a child or children while on the job. Of the 197 people who answered this question, 21.3% of them said they had while 77.7% said they had not been, and 1.0% said they did not remember or were unsure.

Of those 42 people who indicated they had been concerned about the safety or well-being of a child, 33.3% said that these types of situations happen once or twice a year, 28.6% said less than once a month, 11.9% said once a month, 14.3% said 2 or 3 times a month, while 2.4% each said once a week and 2 or 3 times a week, and 7.1% said that it happens daily.

Intimate Partner Violence

Slightly more respondents reported being concerned about intimate partner violence than being concerned about child maltreatment. Participants were asked: "In the past 12 months while working in this position, have you encountered adult partners you thought were in violent relationships?" Out of 193 people who answered this question, 29.4% of them indicated that they had encountered these situations, while 62.4% indicated they had not experienced this. Sixteen people, or 8.2%, indicated that they could not remember or were unsure.

Almost half (49.1%) of those 57 participants said they encountered situations in which they were concerned about intimate partner violence once or twice a year. About 31.6% said they found themselves in these situations less than once a month, while 5.3% said it happens once a month. Seven people, or 12.3%, said it happens two or three times per month, and one person (1.8%) said it happens two or three times a week. None of the participants said it happens once a week or daily.

Elder/Vulnerable Adult Maltreatment

In this section of the survey, participants were asked if in the past 12 months while working in their current position, they have been concerned about the safety and/or well-being of elderly and/or disabled adults. Of the 191 participants who responded to this question, 24.6% indicated that they have found themselves in that situation, while 72.8% said they had not, and 2.6% said they were unsure or did not remember.

Of the 47 participants who said they had been concerned about the safety or well-being of an elderly or disabled adult in the past year, 42.5% said they found themselves in these types of situations once or twice a year. Less than once per month was reported by 29.8% of the respondents, while 10.6% said it happened monthly. About 8.5% said these situations came up

two or three times per month, while only one person each said it happened once per week and two or three times per week. Two people (4.3%) said situations like this occur daily.

Reasons for Concern

Child Maltreatment

Participants were asked to think about the most recent time they were concerned about the safety or well-being of a child, and select the reasons why they were concerned from a provided list of warning signs of child abuse and neglect. The most commonly reported reasons for concern were related to neglect. Twenty-eight, or 68.3%, of the 41 participants who answered this question cited an unsafe or unclean environment including insect infestation or unmaintained animals as a reason for concern; 56.1% selected the unclean physical appearance of the child/children; and 46.3% identified inadequate utilities including lack of heat, water, electricity, or toileting facilities as the reason for concern. Please see Table 8 in Appendix 2 for the full list of warning signs and reported percentages.

Intimate Partner Violence

Reminiscent of the section on children, the participants were asked to think of the most recent situation they encountered in which they were concerned about adult partners being in violent relationships, and then asked to indicate what prompted their concern on a list of warning signs of intimate partner violence. The most commonly cited reason among the 53 participants who answered this question was “something one partner said made you suspicious” with 50.9% participants selecting this response. The next most common reason for concern cited was “one partner threatened to harm or damage things the other cares about” with 37.7% of the participants selecting this option, and “destroyed something that belonged to the other” with 26.4% of the participants. Please see Appendix 2, Table 9 for a full list of cited reasons for

concern about domestic violence. Eleven, or 20.6% of the participants indicated that they had "other" reasons for concern that were not on the list of warning signs. Three of those participants wrote in that they were concerned because of evidence of animal abuse and two wrote in that there were threats to harm or kill the pets.

Elder/Vulnerable Adult Maltreatment

The top two reasons for concern for elders and/or disabled adults were the same as the reasons for concerns about child maltreatment; an "unsafe or unclean environment including insect infestation or unmaintained animals" was reported by 57.4% of the participants, along with an "unclean physical appearance" was reported by 53.2%. Other common concerns were "inadequate utilities including lack of heat, water, electricity, or toileting facilities" which was reported by 38.3% of the participants, "inadequate food or meal preparation supplies in the household" which was reported by 27.7%, and "evidence that older adult is left alone in an unsafe environment for extended periods of time without adequate support" and "something the person said" which were both reported by 25.5% people. Please see Table 10 in Appendix 2 for all the reasons provided and the reported percentages. In the qualitative responses, two people indicated that they had encountered an elderly person with dementia, which presumably puts the elder at risk.

Response, Reasoning, and Confidence

Summary data for responses to child maltreatment, intimate partner violence, and elder/vulnerable adult maltreatment may be found in Tables 11 through 13 in Appendix 2. The results for each situation in regards to reasoning influencing the responses are located in Tables 14 through 16 in Appendix 2. A comparison of how confident the participants were across situations may be found in Figure 8 in Appendix 1.

Child Maltreatment

When asked how they responded to the situation, almost half (48.8%) of the 41 respondents reported that they called the Department of Children's Services/a child abuse hotline. Equal number of participants, 29.3%, stated that they spoke to the parents/caregiver or that they reported the situation to their supervisor where they work/volunteer. Six participants, 14.6%, provided the parents/caregivers with information about services in the area. Five people, 12.2%, said that they called law enforcement while one person said they called emergency medical services. Five (12.2%) participants said they took different action, including one who said they "spoke with the child to verify reasoning, those involved, frequency, immediate threat or fear" and another who said they referred to an internal social services team for further assessment.

When asked about the factors that influenced their decision to respond in the manner they did, the most commonly cited reason was agency/organization policy with 55.0% of 40 participants selecting that reason. Twelve people, or 30.0%, gave the severity of the situation and the age of the child/children involved as factors that influenced their decision. Twenty-five percent said the attitudes of the parents/caregivers influenced their response. A desire to follow the law was a factor for 22.5% of the participants. Only 12.5% were concerned about damaging their relationship with the client/animal owner, and only 5.0% said they were not sure who to call or how to respond. Ten-percent selected "none of the above/I don't know/unsure". Twenty-percent selected "other" as a reason; however, two people wrote in "mandated reporter" and one wrote in "sw licensure" which are both reasons that have to do with following the law.

When asked how confident the participants felt about knowing what to do in the situation, 55.0% of the 40 who responded indicated that they felt "confident" or "very

confident". Three people, 7.5%, reported feeling "neutral" while 27.5% reported feeling "somewhat confident" and 10% reported feeling "not confident at all."

Intimate Partner Violence

When asked how they responded in the most recent situation in which they were concerned about an adult in a violent relationship, 46% of 56 respondents indicated that they had given information about domestic violence resources in the area. Just over 28% reported that they had told their supervisor about the situation. Around 14% called law enforcement and 1.8% called emergency medical services. Almost 18% reported that they had taken other actions and another 18% reported that they had done "none of the above". Some of the other actions included making a report about animal abuse, making notes in a case file, offering emergency boarding services for the person's pet, and telling the aggressor to stop.

When asked about the factors that influenced their response to the situation, 27 of 56 (49.1%) of participants selected "there was no solid evidence of domestic violence." The next most common reason selected with 30.9% participants was that they were influenced by agency/organizational policy. As in the situation regarding child maltreatment, the severity of the situation was a factor for 21.8% participants, and 16.4% were afraid that they would make things worse. Not being sure who to call or how to respond was a problem for 14.5% of the participants. A small number, 5.5%, of participants were influenced because the people involved asked them to respond a particular way. Almost 13% indicated that other factors influenced their decision. In the qualitative responses, reasons given were that a police report was already being processed and in one case, that the person involved is well-known.

The participants were less confident that they knew how to respond in the domestic violence situations than they were in the child maltreatment situations. Not quite 15% of

participants said they were “very confident” and 22.2% said they were “confident” they knew what to do. Approximately 17% described their confidence level as “neutral”, while sixteen 29.6% said they were “somewhat confident” and the remaining16.7% said they were “not confident at all”. As previously mentioned, this information can be found in Figure 8 in Appendix 1.

Elder/Vulnerable Adult Maltreatment

As when asked about how they responded to domestic violence situations, a majority of the participants, 46.8% , provided the person with information about who they could call for help. The next most common response, 36.2% of the participants, indicated that they called Adult Protective Services of an elder abuse hotline. Around 30% of the participants said they helped the person contact relatives or friends for assistance. About 28% said that they told their supervisor about the situation. About 21% called law enforcement, and 6.4% called emergency medical services. One person, 2.1%, indicated that they did none of the above options, while 25.5% indicated they responded in another way. Several people wrote in the qualitative responses that they tried to help the elder themselves, either by calling other agencies on that person’s behalf, collecting donations for the elder, or reducing the price of their services.

When asked about their reasoning, the severity of the situation was the most commonly cited factor that influenced their decision making with 41.3% of 46 participants selecting that option. As in the domestic violence situations, not having solid evidence that something was wrong was also a common influencing factor with 34.8% of the participants. As with both the child maltreatment and the domestic violence situations, agency/organization policy was also a commonly cited factor by 26.1% of participants. A desire to follow the law was cited by 21.7% of the participants, while 19.6% were influenced by the severity of the person’s disability. About

11% were afraid they would damage their relationship with the client/animal owner. Over 8% of the participants indicated that they did not know who to call or how to respond to the situation, and 6.5% of them said they were afraid they would make things worse. Slightly over 4% of participants said they were influenced by other people in the household, and another 4% said that none of the above reasons applied. Almost 16% of participants indicated that other factors influenced their decision, and in the qualitative responses, some of those factors were that law enforcement was already involved, they felt a moral responsibility to help, or that they consulted with other more experienced staff.

Almost 11% of 47 participants said they were "very confident" and 31.9% said they felt "confident" that they knew how to respond to the situation involving an elderly or vulnerable adult. About 15% of participants said they felt "neutral", while another 31.9% said they felt "somewhat confident" and the last 10.6% said they did not feel confident at all.

Hypothesis 1

The first hypothesis proposed in this study was there would be differences in the family violence situations encountered by people in different types of animal welfare positions. There was variation in encountering these situations based on the type of position a participant holds.

One-hundred percent of those who identified as animal control officers (n = 6) and nine out of the ten people who said they were humane law enforcement officers encountered situations in which they were concerned about the safety or well-being of a child or children, while this was true of 30% or less in all of the other positions. However, using the aggregated position variable which created three broad categories of animal care, veterinary medicine, and other to conduct a Fisher's exact test analysis did not find a statistically significant relationship between position and experiencing these situations regarding children.

Two thirds (66.7%, $n = 6$) of the animal control officers and 100% of the humane law enforcement officers ($n = 10$) had encountered situations in which they were concerned about intimate partner violence, while 33.0% or less reported encountering intimate partner violence in all of the other positions. Once again, using the aggregated positions variable to conduct a Fisher's Exact Test, a statistically significant relationship between position and being concerned about potential intimate partner violence was found.

Only 50% of the animal control officers ($n = 6$), and 70% of the humane law enforcement officers ($n = 10$) said they encountered situations in which they were concerned about elderly or disabled adults. However, unlike in the child maltreatment and domestic violence sections, almost half, 47.1%, of the seventeen people who identified as city/county animal shelter employees said they had been in these situations. Using the aggregated position variable to conduct a Fisher's Exact Test revealed that there was a statistically significant relationship between position and being concerned about an elderly and/or disabled adult while on the job.

Further testing was conducted to determine if there was s statistically significant difference in reporting being concerned about family violence situations between those who identified as animal shelter or rescue employees and those were volunteers. The categories of "animal rescue employee" and "city/county animal shelter employee" were combined into a single category in order to be compared to the animal shelter or rescue volunteers. Using Fisher's Exact Test, there was not found to be a statistically significant difference between employees and volunteers reporting being concerned about the safety or well-being of children or being concerned about potential domestic violence. However, there was a statistically significant difference between shelter or rescue employees and volunteers being concerned about the safety of well-being of an elderly and/or vulnerable adult. Forty-one percent ($n = 39$) of

shelter and rescue employees reported being concerned about an elderly and/or vulnerable adult compared to 16% (n = 50) of the volunteers.

Using Fisher's Exact Test, there was found to be a statistically significant difference in whether participants reported being concerned about all three of the family violence scenarios depending on whether they investigated allegations of animal abuse and neglect. Forty-four percent (n = 68) of the participants who reported investigating allegations of animal abuse and neglect reported being concerned about the safety or well-being of a child, while 50% reported being concerned about potential domestic violence (n = 68) , and 43.3% reported being concerned about an elderly and/or disabled adult (n = 67).

There was also found to be a statistically significant difference between those who reported they conduct welfare checks on animals and those who do not and whether they reported being concerned about child maltreatment, domestic violence, and the maltreatment of an elderly and/or vulnerable adult. Of those who do welfare checks on animals, 38.9% (n = 73) reported being concerned about children, 38.9% (n = 72) reported being concerned about domestic violence, and 33.3% (n = 72) reported being concerned about an elderly and/or vulnerable adult.

Despite that 34.4% of the people who reported that they respond to reports of nuisance animals also reporting being concerned about children (n = 32), and 37.5% reporting being concerned about elderly and/or vulnerable adults (n = 32), these were not found to be statistically significant. However, a statistically significant difference was found between those who investigate reports of nuisance animals being concerned about domestic violence. Almost 47% of the 32 participants who reported they respond to reports of nuisance animals indicated that they had been concerned about domestic violence.

In summary, using the aggregated positions variable which places the animal welfare employment positions into three categories—animal care, veterinary medicine, and other—to conduct Fisher's Exact Tests, significant relationships were found between the type of animal welfare position and being concerned about intimate partner violence and elderly and/or vulnerable adults, but not with child maltreatment. A statistically significant difference was found between animal shelter and rescue employees and volunteers in reporting being concerned about an elderly and/or vulnerable adult, with more employees reporting being in that situation. Statistically significant differences were also found in reporting being concerned about all three types of family violence situations based on whether participants investigate allegations of animal abuse and neglect, and whether they conduct welfare checks on animals. A statistically significant difference was also found between those who respond to nuisance complaints about animals being concerned about domestic violence.

Hypothesis 2

The second hypothesis proposed by the author of this study was that people who received training regarding child maltreatment, intimate partner violence, and/or elder maltreatment will be more likely to report situations to law enforcement or protective services than those who did not receive training. While presented as a directional hypothesis, differences in either direction would be of interested and therefore, two-tailed tests were used.

To test the second hypothesis, that people who received training in child maltreatment will be more likely to report to law enforcement or the Department of Children's Services, a new variable was created that combined contacting those one of those two services into a single yes/no variable. The new variable was created due to half of the cells in the contingency table having expected counts less than five when analyzing the "called law enforcement" variable on

its own. Then, using a 2 x 2 contingency table, Fisher's Exact Test was conducted to see if there was a statistically significant difference in choosing to call law enforcement or the Department of Children's Services by whether someone had received training about child abuse and neglect, but relationship was not significant. Additional testing found that none of the responses to concern about child maltreatment differed significantly by receiving training about child abuse and neglect.

The procedure was repeated in order to test whether contacting law enforcement differed by receiving training on domestic violence, which was not significant. Interestingly, while calling law enforcement did not differ significantly by receiving training about intimate partner violence, additional analyses using Fisher's Exact Test found offering the person resources for domestic violence differed significantly by receiving training in intimate partner violence.

Training on elder abuse and neglect was not as common as training on child abuse or domestic violence; only 28.9% (11 of 38) of the participants who indicated they had been in situations concerning elderly or disabled adults also indicated that they had training on the subject.

To test the second hypothesis as it applies to elderly and/or vulnerable adults, specifically that people who receive training in this area will be more likely to report to law enforcement or Adult Protective Services, contacting one of those two services was combined into a single yes/no variable. As in the child maltreatment section, these options were combined due half of the cells in the contingency table having less than five as the expected count when analyzing the law enforcement variable separately. Using a 2 x 2 contingency table, Fisher's Exact Test was conducted to see if choosing to call law enforcement or the Adult Protective Services differed by receiving training on elder abuse and neglect, but this was not found to be statistically

significant. However, in additional testing, responding by helping the person to contact friends or relatives for assistance was found to differ significantly by receiving training in elder abuse and neglect.

Subsequent testing was conducted to see if whether participants reported being in situations in which they were concerned about the safety or well-being of a child differed significantly by receiving training. A contingency table of those two variables found that 23 of the 38 (60.5%) of those who had been concerned about a child or children and responded to both questions, had received training on child abuse and neglect. Using a recoded variable in which the "unsure" responses (n =2) to whether the participants had been concerned about a child were recoded into "no" responses resulted in a 2 x 2 contingency table. Being concerned about the safety or well-being of a child differing by whether the person has had training about child abuse and neglect was found to be statistically significant.

Similar to the results about training about child abuse and neglect, 61.5% of the 39 participants who indicated they had been concerned about adults in violent relationships also indicated that they had received training about domestic violence. Participants who had marked they were "unsure" about being concerned about potential domestic violence were recoded as "no" responses (n=16), resulting in a 2 x 2 contingency table. Fisher's Exact Test revealed whether a person had been concerned about domestic violence while on the job differed significantly by receiving training in domestic violence.

Additionally, looking at the broader sample, after recoding the participants who said they were unsure/did not remember if they had encountered this type of situation (n =5) as "no" responses resulting in a 2 x 2 contingency table, Fisher's Exact Test was conducted, and whether they reported being concerned about an elderly or disabled adult differing by whether

participants reported receiving training in elder abuse and neglect was found to be statistically significant.

In summary, while receiving training was found to have a statistically significant impact on reporting being concerned about situations involving child maltreatment, domestic violence, and the abuse of elderly or vulnerable adults, the proposed hypothesis that receiving training would have a statistically significant impact on responding by calling law enforcement or protective services was not supported. While none of the responses to dealing with concern about child maltreatment were found to differ significantly by receiving training, offering resources for domestic violence victims and assisting vulnerable adults to call friends or relatives did differ significantly by training as found in successive testing.

Hypothesis 3

The last hypothesis proposed by the author of the current study was as follows: people who believe they live in areas where there are resources for people in situations of maltreatment will be more likely to make a report than those who do not believe they live an area with resources. As with previous hypothesis, while it is presented as a directional hypothesis, differences in either direction would be of interest, hence the use of two-tailed tests.

Interestingly, of 188 participants who answered the question, 82.4% agreed or strongly agreed that there are places in their geographical area for children and families to get help. However, only 38.8% agreed or strongly agreed that it was easy for children and families to get help when they need it indicating that while services are available, there may be many actual or perceived barriers to obtaining them. Hypothesis testing required aggregating “strongly disagree”, “disagree” and “neutral” into one category and “agree” and “strongly agree” were aggregated into another on the resource availability variable, resulting in a dichotomous variable.

This was necessary due to the small sample size of people who reported being concerned about the safety and/or well-being of a child, which resulted in very small expected counts in the contingency table. There was no statistically significant difference found in response to the concern based on belief about resource availability. Additional testing using the same procedure also found no statistically significant difference in response to the concern about children based upon belief about it being easy for families and children to receive assistance.

When asked about the availability of services for adults seeking help for violent relationships, the results were similar to those found when asked about services for children and families. Of 188 participants, 77.1% said they agree or strongly agree that there are places in their geographical area for people to get help because of a violent relationship, but only 36.7% agreed or strongly agreed that it is easy for people to get help to deal with a violent relationship when they need it. As in the analysis related to concern for children, in the concern for adult partners in violent relationships it was necessary to aggregate "strongly disagree", "disagree" and "neutral" into one category and "agree" and "strongly agree" into another, resulting in a dichotomous variable. Almost 70% of the people who provided the person in question with resources (n = 26) "agreed" on "strongly agreed" that resources for people in violence relationships were available in their geographical area but this was not found to be statistically significant. None of the responses to concerns about adults in violent relationships were found to differ significantly by whether a person agreed or disagreed that there were services available.

Participants appeared to believe to a lesser degree that there are services for elderly and /or disabled adults available in their geographical area as of 188 participants, only 63.3% agreed or strongly agreed to that statement. Even fewer, only 26%, agreed or strongly agreed that it was easy for older and disabled to get help when they need it, once again indicating a perceived gap

in the availability of places to get help and the ease at which that help will be obtained. Of the 20 people who called law enforcement or protective services, 63.6% of them agreed or strongly agreed there are services available for elderly and disabled adults in their geographical area. The same procedure as described in the sections on children and intimate partner violence was applied to this section on elders and vulnerable adults. None of the responses to concern about elder or vulnerable adult maltreatment differed significantly by beliefs about availability of resources, nor did they statistically differ significantly by beliefs about the ease of receiving services.

Overall, the ways in which participants responded to concerns about child maltreatment, domestic violence, maltreatment of elderly or vulnerable adults did not significantly differ statistically based upon their belief about the availability of services.

Chapter 5: Discussion

Overview of the Current Study Findings

Twenty-one to twenty-nine percent of the participants indicated that they had been concerned about the safety or well-being of a child or children, adults in potentially violent relationships, or the safety or well-being of an elderly and/or disabled adult while at work in the past twelve months. The most commonly selected reasons for concern for children and the elderly and/or disabled adults were related to neglect: an unclean physical appearance and an unclean physical environment. For adults in potentially violent relationships, the most commonly cited reasons for concern were something the person said followed by threatening behaviors.

The first hypothesis was that the types of situations encountered would be different for the various animal welfare professionals. Concern about adult partners in potentially violent relationships was found to differ significantly by type of position, as did concern for an elderly and/or disabled adult. A statistically significant difference in concern for elderly and/or vulnerable adults was found related to whether participants were an animal shelter or rescue employee or volunteer. Additionally, there was a statistically significant difference in whether a one was concerned about children, domestic violence, and elderly and/or vulnerable adults related to whether as a part of their position participants investigated allegations of animal abuse and neglect, as well as related to whether they conducted welfare checks on animals. Only concern about domestic violence was found to have a statistically significant relationship with whether a person responds to reports of nuisance animals.

The second hypothesis was that people who received training about the different types of family violence would be more likely to report what they were concerned about to law enforcement or protective services. There were no significant results found to support that

hypothesis. However, additional analyses did find that offering the person resources in domestic violence situations and assisting a person with calling relatives or friends for assistance in the case of vulnerable adults did differ significantly by receiving training. Additionally, further testing also found that being concerned about situations of child maltreatment, intimate partner violence, and maltreatment of vulnerable adults did differ significantly by whether a person received training in those topics.

The last hypothesis was that people who believe they live in areas where there are resources for people in situations of maltreatment will be more likely to make a report than those who do not believe they live in an area with resources. There was no evidence to support this hypothesis.

Relevance of the Current Study within the Current Body of Knowledge

The current study is a first step toward filling in the picture of what cross-reporting between human services professionals and animal welfare professionals looks like from the animal professionals' side. As discussed in Chapter 1 in the Background on Cross-Reporting, there is little literature on cross-reporting overall. Much of the current literature on cross reporting discusses the potential benefits and consequences of cross-reporting, and few studies explore the reality of how cross-reporting happens. Additionally, all of the studies at present have been from the perspective of people in human service professions, specifically child welfare. The current study is unique and adds to the overall body of knowledge in three notable ways. First, it focuses on the concept of cross-reporting from the side of people in animal welfare fields instead of those in human welfare services. Second, it is the first study of its kind to break down the process of cross-reporting into concrete dimensions of what the situation was, how the participant responded to the situation, and what factors influenced the decision to

respond in that way, therefore seeking to provide a baseline of what situations professionals are encountering and how they are responding to them. Third, unlike previous studies, the current study focuses on three dimensions of family violence—child maltreatment, intimate partner violence, and maltreatment of elderly and/or vulnerable adults.

While the study is limited, the results do seem to fall in line with the literature discussed in Chapter 2; maltreatment or dysfunction within families is not occurring in a vacuum. While the participants of this study have positions related to animals, 21 to 29% of them indicated that within the past twelve months they have had concerns about a potential child abuse or neglect, domestic violence, or abuse or neglect of an elderly and/or vulnerable adult while doing their jobs. This parallels the results of Montminy-Danna (2007) which found that 22.5% of the child welfare workers in the study had cases that involved animal cruelty. Additionally, a statistically significant difference was found between those who investigate allegations of animal abuse and neglect and those who do not in reporting concern about child maltreatment, domestic violence, and maltreatment of elderly and/or vulnerable adults, which reinforces the premise of the Link between human and animal violence—the interconnectedness of abuse—and reemphasizes the need for cross-reporting between human and animal welfare professionals.

An additional parallel between the human services and animal welfare professions can be found in regards to training. Risley-Curtiss, Zilney, and Hornung (2010) found that about 20% of the 46 states that participated in the study include information in their trainings for public child welfare employees about assessing family members' relationship with animals, and about 17% include information about recognizing and assessing animal abuse. Information about the Link between human and animal violence was included in their core training in 37% of states. Additionally, 26% , 12 of 46 states, reported that some cross-reporting occurs. While it is not

equitable to compare public welfare agencies to individual respondents, one cannot help but notice that similar percentages of respondents in the current study reported receiving training about child abuse and neglect (26%), intimate partner violence (27.3%) and elder abuse and neglect (18%). However, the current study found that while training was related to whether a person being concerned about a situation, it was not significantly related to reporting to law enforcement or protective services. Whether looking at agencies or individuals, it is clear that there is a great deal of room for further training in order to better serve family systems.

Based on the responses received, the concerns regarding confidentiality and damaging the relationship between participant and the client/animal owner do not appear to be as prominent as they are among human services professionals (Arkow, 1999; Long, Long, & Kulkarni, 2007). Instead, the agency or organization's policies were a commonly reported influencing factor on how people responded in the current study. Perhaps in practice these disparate influences are actually one and the same since human services professionals are bound by agency and organizational policies about confidentiality that animal welfare professionals may be not be subject to. However, Risley-Curtiss, Zilney, & Hornung (2010) reported that only 3 of 46 states indicated that their public child welfare agencies had cross-reporting policies in place, but that 12 of the 46 states said that some cross-reporting occurs which seems to point to something other than having cross-reporting policies in place is impacting cross-reporting in practice. Additional research may help elucidate these distinctions.

As found in literature about child and elder maltreatment, the most common forms of these offenses are acts of neglect. These findings were reiterated in the current study with the most common reasons for children and elderly and/or vulnerable adults being an unclean physical environment or an unclean physical appearance. As mentioned in the review of

literature about domestic violence and animal abuse, threatening behavior was often a common occurrence, and this was also reflected in the current study.

While the current body of knowledge about the connections between family dysfunction and animal abuse is substantial, reflecting the reasoning and need for cross-reporting, the knowledge about process of cross-reporting is limited. The current study begins to fill in a missing piece of body of knowledge by opening the door on cross-reporting from the animal related professionals' perspective.

Strengths of the Current Study

Despite its many limitations which will be discussed in the next section, this study is a positive step in the area of cross-reporting research in two ways. First, this study is unlike any other in that it approaches the concept of cross-reporting from the perspective of people in animal related fields. Second, it attempts to quantify the state of cross-reporting as it is currently, unlike Zilney & Zilney (2005) which tested a training and questionnaire protocol, therefore taking the first step toward obtaining a baseline picture of where people in animal related fields may be starting from in regard to cross-reporting. Additionally, this study not only takes cross-reporting from the animal welfare side, but it also breaks the process down into what they are seeing, how they are responding, and what influences their response.

For the purpose of data collection, the use of the Qualtrics online survey provided a way to reach many people relatively quickly at no extra financial expense. Additionally, the use of the online format allowed participants to be moved through the survey based upon their answers, eliminating the need for participants to read through questions that were irrelevant to them.

The survey instrument was based upon research conducted about mandatory reporting of child abuse among various profession as well as instruments that are commonly used to assess

for signs of family violence. Additionally, the survey broke down complex concepts like child maltreatment into distinct visible signs that the participants could select. The tool addresses children, adults, and elders in order to gain a broad picture of what the participants have experienced, and be able to collect data to compare the different situations.

Limitations of the Current Study

The biggest limitation to this study is that the level of generalizability of the results from this sample to the population of people in animal related fields is unknown for several reasons. Since this is a non-probability sample in which all of the participants were self-selected, it introduces selection bias into the sample. There is no way to know for certain if or how the people who chose to complete the survey are different from those who did not. Additionally, because of the use of an online survey that was open to anyone, it is not possible to know for certain that all of the respondents truly are part of the desired population. As revealed when asked to describe their position, almost one-third (28.3%) of the participants selected "other" and when given the opportunity to write in what they do, some participants wrote in positions such as "dog walker", "pet sitter", and "animal communicator". However, many of the participants who selected "other" did not write in their job title therefore leaving the exact nature of their work unknown. These participants were left in the analysis as they did meet the eligibility questions regarding working with animals and having contact with animal owners, therefore having the potential to encounter family violence situations despite working in an animal-related field, but this has resulted in a non-representative sample of people in animal welfare fields.

In addition to selection bias, there is also concern for social desirability bias. While no identifying information was collected, the topics covered in this survey—child abuse, domestic violence, and elder maltreatment—are sensitive topics. It is possible that people wanted to

present their actions in the best light and therefore, when asked about their response to a family violence situation, they selected the option they perceived as a good choice, or perhaps exaggerated the extent to which they responded to the situation.

Recall bias must also be taken into account. While one might presume that being faced with a situation of potential family violence would be prominent in someone's memory, it may be that the participants were unable to recall situations they encountered over the past 12 months. Additionally, for the participants who reported that they do encounter these situations, it may be that they incorrectly remember how often they happen.

Another important limitation is the relatively small size of the sample. While the survey link was available for several months, only 256 people opened the survey, and of those only 216 people currently worked in positions that deal with animals and also had some contact with animal owners. When looking at how often people encounter the different types of maltreatment, what they saw, and how and why they responded, the sample was even smaller—often less than 50—making meaningful comparisons difficult. Very small sample sizes result in inadequate statistical power, meaning that only large effect sizes may be detected. It is possible that the statistically insignificant results found throughout the current study may have been due to inadequate statistical power.

Demographically the sample was overwhelmingly Caucasian and female, leaving no opportunity to compare variation between races and genders. Additionally, the sample was geographically limited, with almost one-third (30.37%) of the sample coming from Tennessee, while other states had no participants at all. Each geographic location has its own unique set of norms, strengths, and challenges when it comes to both human and animal welfare. As mentioned in Chapter 1, laws vary greatly by state when it comes to cross-reporting, as well as

animal welfare standards which could potentially result in significant differences between geographic locales in training and reporting of situations.

In addition to the limitations of the sample, the survey instrument has deficiencies as well. How a person responds when encountering a family violence situation can vary greatly depending on the situation; what the person does in one situation may be completely different in the next one based upon the circumstances. The survey instrument used asked the participants to focus on the most recent experience they had in an attempt to put the person's reaction into quantifiable terms; much of the detail and nuance is lost, and focusing on one instance may not provide a picture of the typical experience. Additionally, while attempting to cover as many options as possible when providing selections to choose from, seeing the large number of answer choices provided on many of the questions may have been overwhelming to some participants, prompting them to potentially rush through their answers or perhaps stop the survey before completing it.

Missing data is another limitation of this study. While 216 people met the eligibility requirements for this survey, not all 216 people answered the complete survey; depending on the item on the survey, anywhere from 9% to 13% of the responses are missing. In general, the number of responses decreased the further into the survey the item was, so it is possible that participants became fatigued answering the questions. Skip logic was used in the design of the survey, allowing participants to pass questions that did not apply to them. However, if the participants indicated that they had encountered each type of family violence, they were presented with all of the questions. The topics may have also caused participants' unwillingness to respond. Thinking about an abusive or neglectful situation they had witnessed may have been upsetting, and influenced their decision not to answer a particular question. Or, it is possible that

the respondents did not understand all of the questions and chose to skip them. There is also the possibility of user or computer error. Perhaps participants believed they had clicked on a response before moving on to the next question, but the response was not recorded. Unfortunately, there is no way to be certain the reasoning behind the missing responses.

While the online survey format has advantages, there are also methodological limitations. As mentioned above, the link was available to anyone with internet access and therefore may have reached people outside of the intended audience. Because of the format, the survey was limited to people with internet access. While many animal welfare organizations have websites and organizational emails, it may be that there are significant numbers of people and organizations that do not and therefore had no potential of being involved in this survey. It is also possible that people who do not have easy internet access may be living in more rural and/or lower income areas, which could mean that their experiences are meaningfully different in a variety of ways from the people who participated in this study. Specifically, people living in rural and/or lower income areas may have lower levels of education and training available to them. The resources available may be fewer, influencing what people perceive their options to be when it comes to making reports of abuse and seeking assistance. Additionally, the perception of what behaviors or situations are of concern might be different than those who responded to the current study. The participants in the current study were most likely to come in contact with the survey link on social media, particularly on Facebook. By having access to a broad network of people, the participants in the current study have access to a wide variety of knowledge and resources that people without internet access may not be able to engage so easily.

Recommendations for Future Research

The current study has provided some insight into what situations people in animal related professions encounter regarding family violence while on the job. However, there is still much more to learn.

Additional work on the instrument used in the current study is needed. Specifically, the instrument should be edited so that the current eligibility questions are removed and individual position question becomes the eligibility criteria. This would better ensure that people who work in animal welfare would be the people included in the sample. The survey currently asks if participants have encountered situations of child abuse, intimate partner violence, and elder maltreatment and how often it happens. An additional question should be added that asks the participants how many times they have encountered these situations in the past twelve months. More choice options should be added to the factors influencing the participant's response to the situation, such as being concerned that the animal owner would find out who made the report. A paper form of the instrument should also be considered. In a hard-copy format, the survey could be distributed at animal welfare conferences and meetings. This would be another way to access the desired population and do so in larger numbers. However, due to its length, it may also be prudent to break the survey instrument into three separate tools—one for assessing experiences with child maltreatment, one for assessing experiences with intimate partner violence, and one for assessing experiences with elder maltreatment.

The current study found that most if not all of the animal control officers and humane law enforcement officers who responded to this study encountered situations in which they were concerned about child maltreatment, domestic violence, or maltreatment of elderly and/or disabled adults. Additional research is needed that focuses on people specifically in these

positions with larger samples to determine if this finding is consistent across animal control and humane law enforcement officers. Qualitative studies and focus groups of these groups should also be conducted in order to gather more detailed information, similar to Montminy-Danna (2007) using focus groups of child welfare workers. To address the issues of selection bias and recall bias, studies need to be conducted in which the groups are not self-selected to participate, and real-time data is collected. One potential option would be to have participants provide the details of every case they handle for a period of time, and then the researcher could go back and code the reports.

While narrowing the focus on animal control officers and humane law enforcement officers, there is also a need to broaden the scope in future research on what situations they are encountering. The current study focused on three areas of family violence, but that is not the norm in this body of research. As demonstrated in Chapter 2, there is much more literature about children and the relationship to animal abuse than there is about domestic violence and elder abuse and animal abuse. This is even more obvious in the literature involving cross-reporting; it is exclusively about people working in child welfare in some capacity. While Peak, Ascione, and Doney (2012) used Adult Protective Services workers as their sample, they did not ask about reporting behaviors. More studies are needed about cross-reporting in domestic violence situations and situations involving vulnerable adults to determine if and how they are different from cross-reporting scenarios involving children.

The results of the current study in regards to receiving training bring up some interesting questions as well. The current study found that training did not significantly impact how the participants responded to maltreatment situations except for providing resources in domestic violence situations and helping the person call friends or relatives for assistance in the case of

elderly and/or vulnerable adults. However, receiving training was statistically significant as it relates to reporting that the participants had been concerned about a maltreatment situation in the past year. The question is, which came first? Do people who are more likely to be in situations where they might encounter child abuse, domestic violence, or elder abuse more likely to get training? Or, are people who receive training about these topics more aware and therefore more likely to perceive the warning signs of abuse? Further research on the practical application of cross-reporting, in the same vein as Zilney & Zilney (2005), should be conducted to assess the impact of more training on cross-reporting. A pre-post design should be used to determine a baseline of people in animal welfare's awareness of family violence before training and how often they report encountering family violence situations at work, and how they respond to the situations. After training is implemented, the same data should be collected and compared to the baseline to determine what impact training has made.

Another point in the results of the current study that should be followed up on in future research was that agency or organizational policy was a commonly listed factor that influenced the participants' decision making. Organizational studies should be conducted that review what policies are in place in the organizations where policy is consider influential to determine what makes them so. Once more information is available about what these professionals are experiencing, that will open the way for needs assessments to determine what trainings and potential policy additions or changes may be necessitated in order to make the cross-reporting systems function more smoothly.

It may be possible that personality type may also play a role in how animal welfare professionals assess and respond to family violence situations. Do animal welfare professionals who are more extroverted or more people-oriented notice more family violence situations? Are

they more likely to take an active role in responding to the situation? It may be that how people respond to family violence situations may be related to assertive versus passive personality traits. Or perhaps it has more to do an inclination to follow the rules—are some people more inclined to focus strictly on their role in animal welfare while others are more inclined to take a broader look at the entire situation. Studies involving personality testing and then providing animal welfare professionals with scenarios to see how they respond could provide interesting information about how the influence of the individual's own personality on their responses.

In additional to studies on personality and its impact on cross-reporting, research on people's attitudes toward other people—like children, domestic violence victims, and the elderly or disabled—could provide an interesting peek into how and why animal welfare professionals respond to situations they encounter while on the job.

Lastly, additional information about animal professionals' attitudes and perceptions of dealing with family violence situations while doing their jobs with animals would also be beneficial. While the current study asked the participants if they encounter these situations, it did not ask if the participants make a point to look for the warning signs, if they feel like they should be actively assessing to determine if there may be family violence occurring. Do they perceive looking for family violence as a part of their job, or do they perceive it as something beyond their purview? Do animal welfare professionals recognize that they are in a distinctive position in which they have a greater opportunity to observe potential abuse than others in the general public? By delving into their attitudes and beliefs about their role in the assessment and response to family violence, a better picture can develop as to whether animal welfare professionals perceive their work as the Link model suggests, with all types of violence being connected.

Summary Conclusion

The purpose of this study was to explore the state of cross-reporting of different types of family violence from the perspective of people in animal welfare fields by investigating what types of maltreatment were being witnessed or suspected while out in the field; how workers are responding to what they perceived; and what factors are influencing their responses. Using an open online survey, this study found that 21 to 29% of the participants indicated that at some point in the last 12 months they have found themselves in situations at work where they were concerned about the safety or well-being of a child, concerned about potential domestic violence, or concerned about an elderly and/or disabled adult. For children and vulnerable adults, warning signs of neglect were the most common reason for concern, while something a person said and making threats most often prompted concerns about intimate partner violence. Agency/organizational policies were a commonly cited reason for responding in the manner the participants did across all three types of situations.

The first hypothesis was that there would be observable differences in situations encountered between different types of animal welfare positions. Using the aggregated positions variable to conduct a Fisher's Exact Test analysis, a significant relationship between position and being concerned about potential domestic violence was found, as well as being concerned about an elderly and/or disabled adult while on the job. No statistically significant result was found for being concerned about the safety or well-being of a child. It was of interest to compare the differences between animal shelter and rescue employees and volunteers and what situations they encounter. A statistically significant difference was not found between employees and volunteers reporting being concerned about the safety or well-being of children or being concerned about potential domestic violence. However, there was a statistically significant difference between

shelter or rescue employees and volunteers being concerned about the safety of well-being of an elderly and/or vulnerable adult. Statistically significant differences were also found in reporting being concerned about all three types of family violence situations based on whether participants investigate allegations of animal abuse and neglect, and whether they conduct welfare checks on animals. A statistically significant difference was also found between those who respond to nuisance complaints about animals being concerned about domestic violence.

The second hypothesis was that participants who received training regarding child maltreatment, intimate partner violence, and elder maltreatment will be more likely to report situations to law enforcement or protective services than those who did not receive training. Responding by calling law enforcement or protective services did not differ significantly by whether a person received training or not. However, responding to domestic violence situations by offering resources did differ significantly by receiving training, as did assisting elderly or vulnerable adults to call friends or relatives. Additional testing also found that whether a person indicated they had been concerned about the safety or well-being of a child, adults in violent relationship, or the maltreatment of elder and/or vulnerable adults did differ significantly by whether a person received training in that topic.

The last hypothesis was that people who believe they live in areas where there are resources for people in family violence situations will be more likely to make a report than those who do not believe they live an area with resources. The ways in which participants responded to concerns about child maltreatment, domestic violence, maltreatment of elderly or vulnerable adults did not significantly differ based upon their belief about the availability of services.

While the current study has substantial limitations, it provides a first glimpse of the state of cross-reporting from the perspective of people in animal related fields. Further research is

needed that focuses on specific professions within animal welfare, captures a more nuanced picture of people's responses to maltreatment, and looks more closely at the impact of training , agency policy, and the impact of an individual's personality, attitudes, and beliefs.

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Appendices

Appendix 1. Figures



Figure 1. The Interconnectedness of Abuse.

Image obtained from the National Link Coalition.

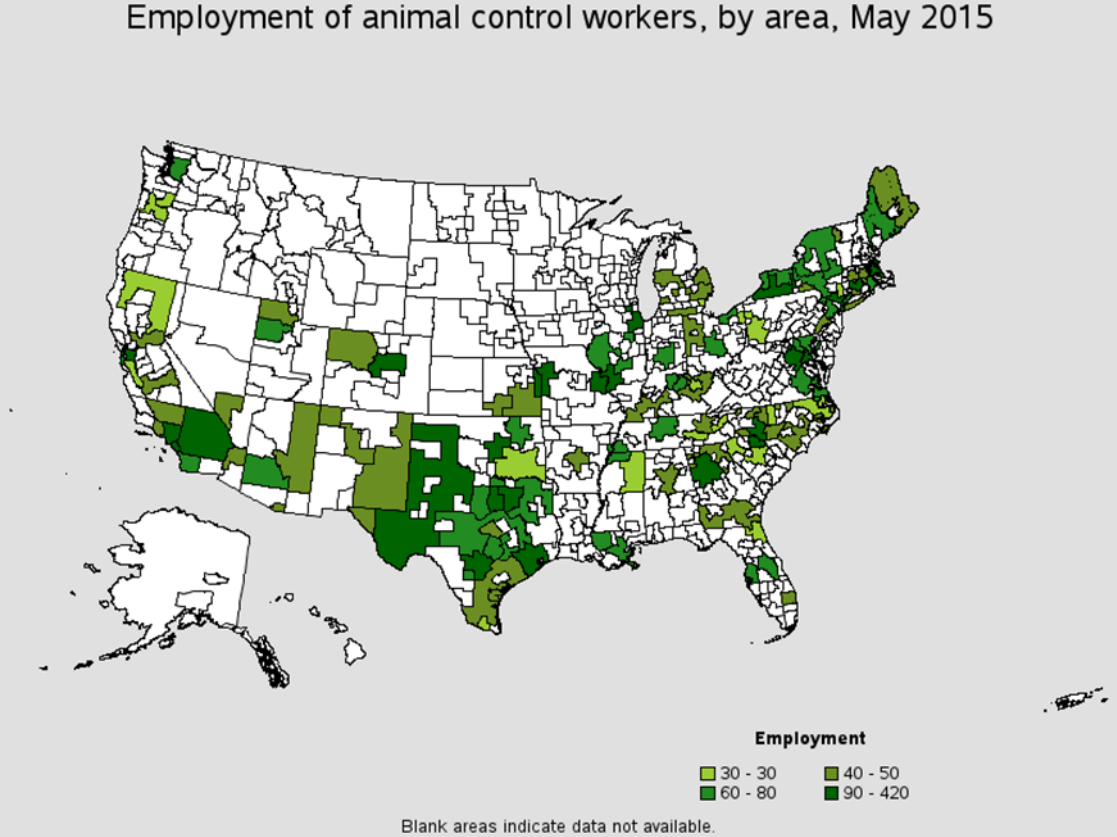


Figure 2. Employment of animal control workers, by area, May 2015

Image obtained from Bureau of Labor Statistics Occupational Employment and Wages, May 2015 , 33-9011 Animal Control Workers

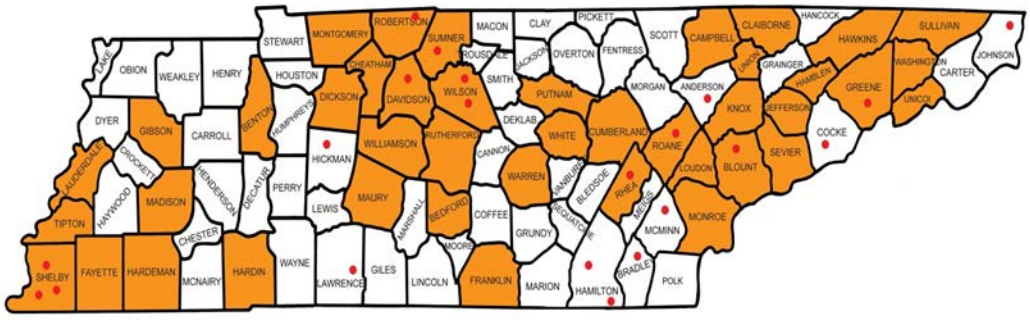


Figure 3. Tennessee Certified Animal Control Agencies.

Orange indicates that there is a certified animal control agency that serves the entire county, while the red dots indicate that there is an agency that serves a particular city.

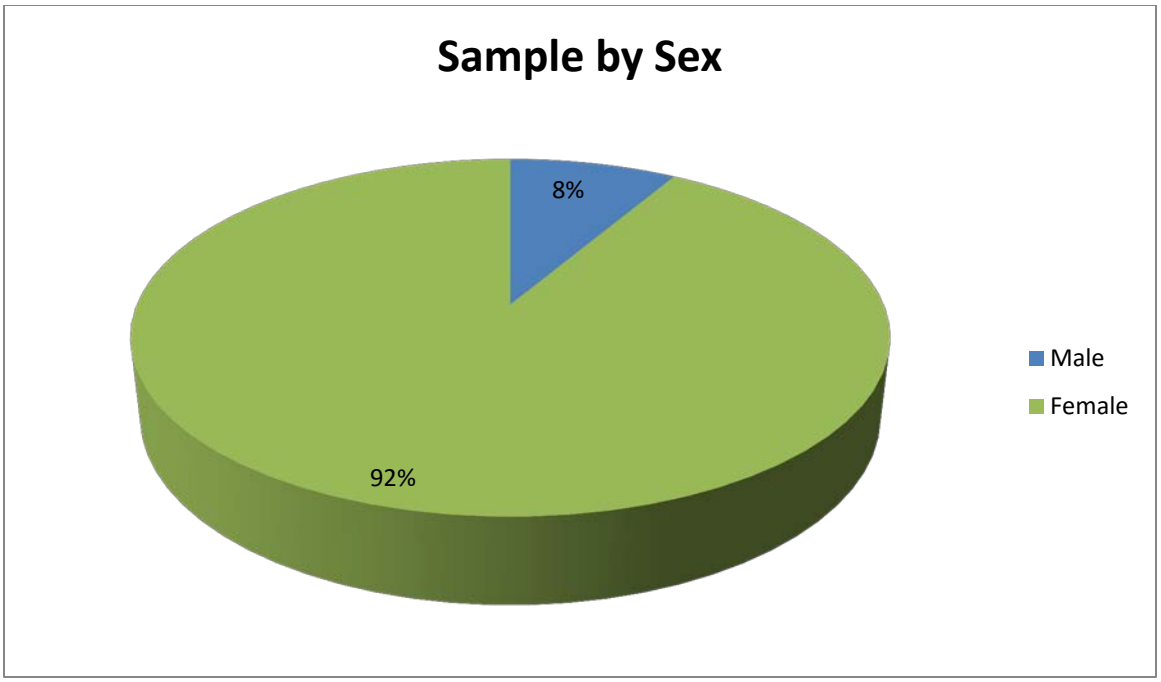


Figure 4. Sample by sex

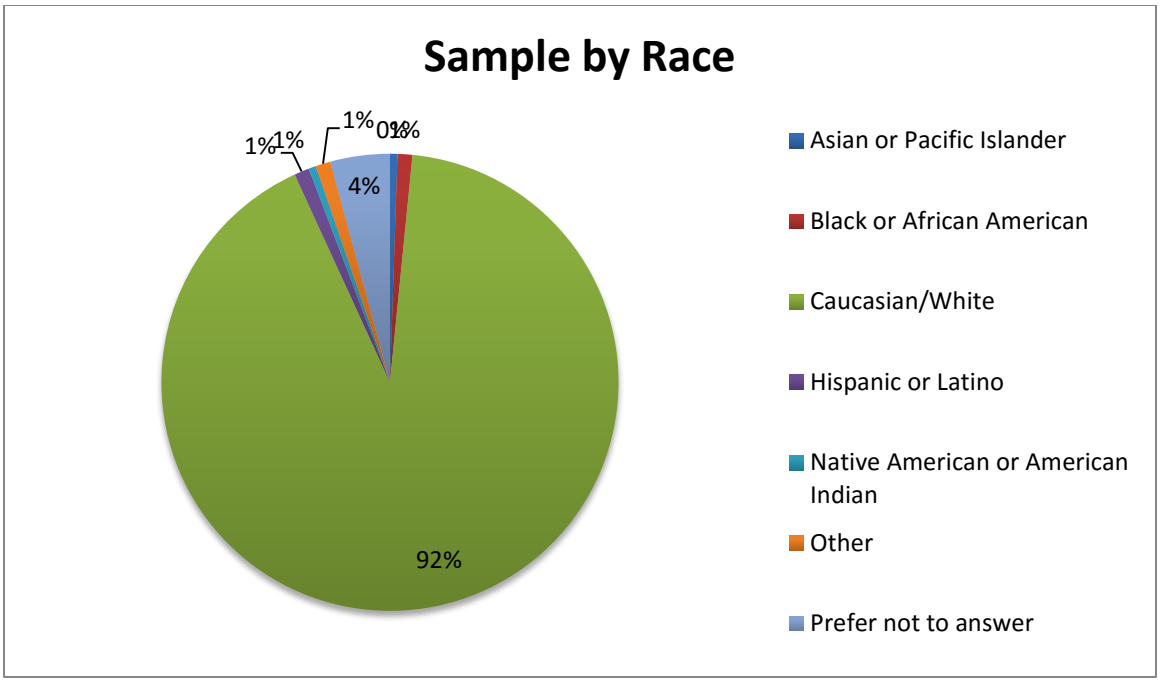


Figure 5. Sample by race.

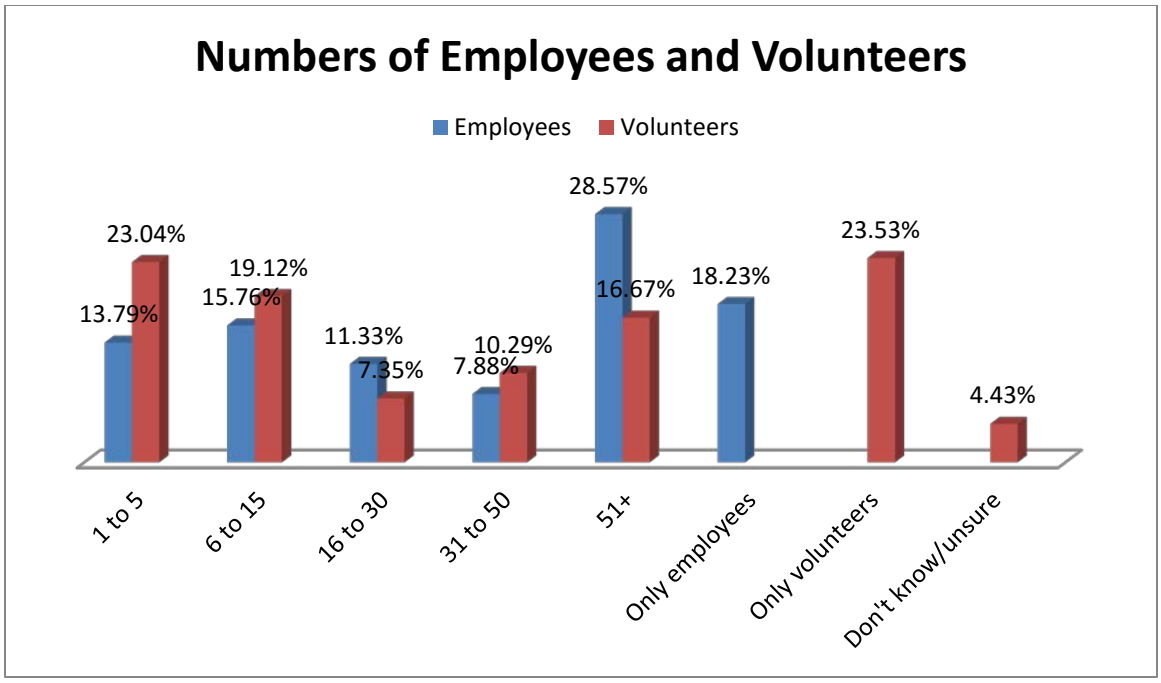


Figure 6. Numbers of employees and volunteers

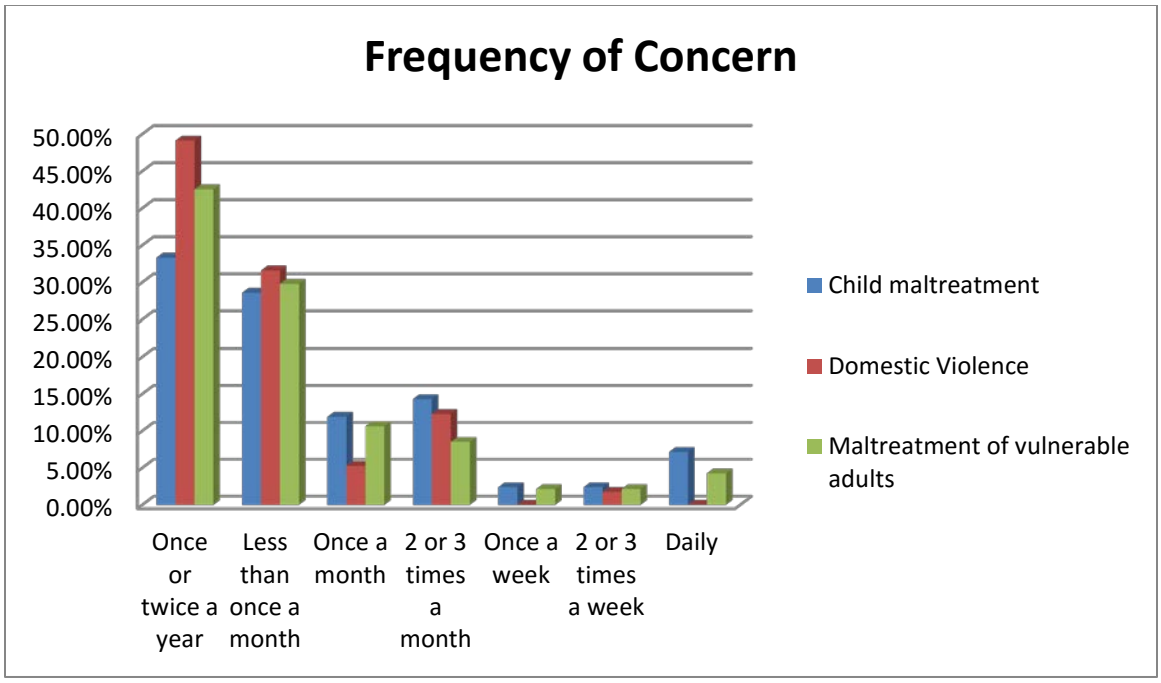


Figure 7. Frequency of concern

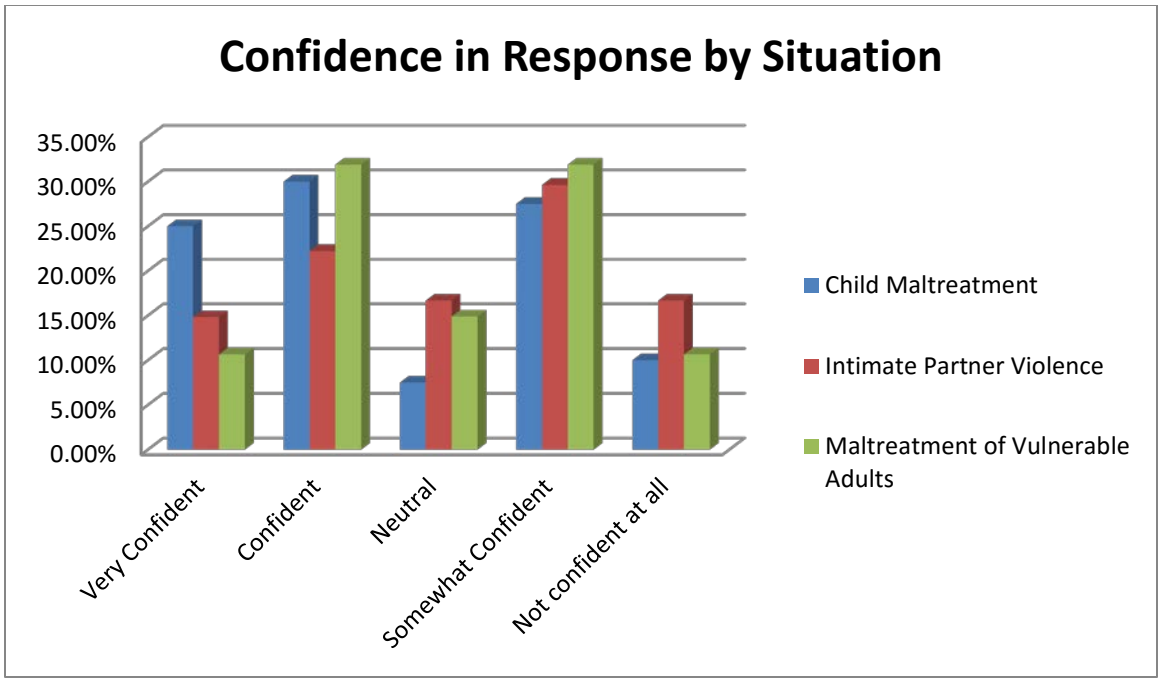


Figure 8. Confidence in Responses by Situation

Appendix 2. Tables

Table 1. Education Level

Highest Level of Education	# of Respondents	%
Less than high school	0	0.00%
High school diploma or GED	33	17.55%
Associates degree (for example: A.A., A.S., etc)	30	15.96%
Bachelor's degree (for example: B.A, B.S., etc)	69	36.70%
Master's degree (for example: M.A., M.S., MEng., M.S.W, M.B.A., etc)	29	15.43%
Professional degree beyond a bachelor's degree (for example: MD, DDS, DVM, LLB, JD, etc)	15	7.98%
Doctorate degree (for example: PhD, EdD)	12	6.38%

Note: N = 188 for this table.

Table 2. Marital Status

Marital Status	# of Respondents	%
Single, never married	47	25.00%
Married or domestic partnership	107	56.91%
Widowed	8	4.26%
Separated	3	1.60%
Divorced	23	12.23%

Note: N = 188 for this table.

Table 3. Sample by State

State	# of Respondents	%
Arizona	3	1.40%
California	5	2.34%
Colorado	2	0.93%
Connecticut	2	0.93%
Delaware	1	0.47%
Florida	8	3.74%
Hawaii	1	0.47%
Idaho	1	0.47%
Illinois	16	7.48%
Indiana	2	0.93%
Iowa	1	0.47%
Kansas	1	0.47%
Kentucky	3	1.40%
Louisiana	1	0.47%
Maine	1	0.47%
Maryland	3	1.40%
Massachusetts	3	1.40%
Michigan	5	2.34%
Minnesota	3	1.40%
Mississippi	3	1.40%
Missouri	1	0.47%
Nebraska	1	0.47%
Nevada	5	2.34%
New Hampshire	1	0.47%
New Jersey	5	2.34%
New Mexico	1	0.47%
New York	11	5.14%
North Carolina	2	0.93%
Ohio	16	7.48%
Oregon	1	0.47%
Pennsylvania	3	1.40%
South Carolina	2	0.93%
Tennessee	65	30.37%
Texas	4	1.87%
Utah	1	0.47%
Vermont	2	0.93%
Virginia	3	1.40%
Washington	7	3.27%
Wisconsin	3	1.40%
I do not reside in the United States	15	7.01%

Note: N = 214 for this table.

Table 4. Individual Position

Animal related position	# of Respondents	%
Animal boarding, grooming, or training	13	6.13%
Animal Control Officer	6	2.83%
Animal rescue employee	24	11.32%
Animal shelter or rescue volunteer	52	24.53%
City/county animal shelter employee	17	8.02%
Humane Officer (law enforcement)	10	4.72%
Veterinarian	16	7.55%
Veterinary Assistant	4	1.89%
Veterinary Technician	10	4.72%
Veterinary Technologist	0	0.00%
Other	60	28.30%

Note: N = 212 for this table.

Table 5. Trainings Received

Topic of Training	# of Respondents	%
Animal behavior	119	79.33%
Animal sheltering	91	60.67%
Animal handling	116	77.33%
Animal hoarding	58	38.67%
Animal adoption policy/procedure	69	46.00%
Euthanasia	81	54.00%
Compassion fatigue/burnout	88	58.67%
Vaccinations	84	56.00%
Animal laws/ordinances	87	58.00%
Child abuse and neglect	39	26.00%
Intimate partner violence or domestic violence	41	27.33%
Elder abuse and neglect	27	18.00%
Other	30	20.00%
None of the above	1	0.67%

Note: N = 150 for this table.

Table 6. Type of Organization

Type of Organization	# of Respondents	%
City/county animal shelter	36	17.56%
Animal rescue organization that has a physical building to house animals	45	21.95%
Animal rescue that uses foster homes	29	14.15%
Veterinary clinic/hospital	38	18.54%
Law enforcement agency	1	0.49%
Other	56	27.32%

Note: N = 205 for this table.

Table 7. Prevalence of Concern

Type of Concern	Sample Size	# of Respondents with Concern	%
Child maltreatment	197	42	21.32%
Domestic violence	193	57	29.53%
Maltreatment of vulnerable adults	191	47	24.61%

Table 8. Reasons for Concern about Children

Reason	# of Respondents	%
Bruises or welts	5	12.20%
Burns	1	2.44%
Fractures or broken bones	1	2.44%
Lacerations, abrasions, and/or cuts	5	12.20%
Injuries that didn't match the explanation given	6	14.63%
Children showed painful body movements such as limping, or having trouble sitting or standing	2	4.88%
Child said s/he was being physically hurt by a parent or caregiver	5	12.20%
Poor height/weight for age	9	21.95%
Unclean physical appearance	23	56.10%
Inadequate food or meal preparation supplies in the household	11	26.83%
Child was physically frail, weak, or dehydrated	3	7.32%
Inadequate utilities including lack of heat, water, electricity, or toileting facilities	19	46.34%
Unsafe or unclean environment including insect infestation or unmaintained animals	28	68.29%
Something the child or children said	8	19.51%
Something the parent/caretaker said to you	8	19.51%
Something the parent/caretaker said to the child/children	9	21.95%
You saw a parent/caretaker physically harm a child or children	5	12.20%
Other	12	12.20%

Note: N = 41 for this table.

Table 9. Reasons for Concern about Domestic Violence

Reason	# of Respondents	%
Bruises or welts	14	26.42%
Burns	1	1.89%
Fractures or broken bones	0	0.00%
Lacerations, abrasions, or cuts	7	13.21%
One partner threatened to harm or damage things the other cares about	20	37.74%
One partner threatened someone the other partner cares about, such as a child or other family member	10	18.87%
One partner threatened to hurt the other	9	16.98%
One partner threatened to kill himself/herself	3	5.66%
One partner threatened to kill the other	3	5.66%
One partner threatened the other with a weapon	3	5.66%
One partner made threatening faces or gestures at the other	7	13.21%
Hit or kicked a wall, door, or furniture	9	16.98%
Drove dangerously with the other in the car	5	9.43%
Threw, smashed, or broke an object	5	9.43%
Threw an object at the other	3	5.66%
Destroyed something belonging to the other	14	26.42%
Held the other person down, pinning him/her in place	0	0.00%
Pushed or shoved the other	3	5.66%
Grabbed the other suddenly or forcefully	5	9.43%
Shook or roughly handled the other	5	9.43%
Scratched the other	1	1.89%
Pulled the other's hair	1	1.89%
Twisted the other's arm	1	1.89%
Bit the other	1	1.89%
Slapped the other with the palm of his/her hand	2	3.77%
Slapped the other the back of his/her hand	1	1.89%
Hit the other with an object	2	3.77%
Punched the other	0	0.00%
Kicked the other	0	0.00%
Stomped on the other	0	0.00%
Choked the other	3	5.66%
Burned the other with something	0	0.00%
Something one partner said made you suspicious	27	50.94%
Other	11	20.75%

Note: N = 53 for this table.

Table 10. Reasons for Concern about Vulnerable Adults

Reason	# of Respondents	%
Bruises or welts	4	8.51%
Burns	0	0.00%
Fractures or broken bones	1	2.13%
Lacerations, abrasions, and/or cuts	3	6.38%
Injuries that didn't match the explanation given	2	4.26%
Person showed painful body movements such as limping, or having trouble sitting or standing	8	17.02%
Person said s/he was being physically hurt by a caregiver	0	0.00%
Unclean physical appearance	25	53.19%
Inadequate food or meal preparation supplies in the household	13	27.66%
Child was physically frail, weak, or dehydrated	3	6.38%
Inadequate utilities including lack of heat, water, electricity, or toileting facilities	18	38.30%
Unsafe or unclean environment including insect infestation or unmaintained animals	27	57.45%
Anxious, trembling, clinging, fearful, scared of someone/something.	4	8.51%
Something the person said	12	25.53%
Evidence that a caretaker has withdrawn care suddenly without alternate arrangements	1	2.13%
Evidence that older adult is left alone in an unsafe environment for extended periods of time without adequate support	12	25.53%
You saw a caretaker physically harm the older and/or disabled adult	1	2.13%
Other	9	19.15%

Note: N = 47 for this table.

Table 11. Response to Child Maltreatment

Response	# of Respondents	%
I spoke with the parents/caregivers	12	29.27%
I gave the parents/caregivers information about services in the area	6	14.63%
I called law enforcement	5	12.20%
I called emergency medical services	1	2.44%
I called the Department of Children's Services/a child abuse hot line	20	48.78%
I told my supervisor where I work/volunteer	12	29.27%
Other	5	12.20%
None of the above	2	4.88%

Note: N = 41 for this table

Table 12. Response to Intimate Partner Violence

Response	# of Respondents	%
Gave one partner information about domestic violence services in the area	26	46.43%
Called law enforcement	8	14.29%
Called emergency medical services	1	1.79%
Told my supervisor where I work/volunteer	16	28.57%
Other	10	17.86%
None of the above	10	17.86%

Note: N = 56 for this table

Table 13. Response to Elderly/Vulnerable Adult Maltreatment

Response	# of Respondents	%
Gave the person information about who they could call for help	22	46.81%
Helped the person contact relatives or friends for assistance	14	29.79%
Called law enforcement	10	21.28%
Called emergency medical services	3	6.38%
Called Adult Protective Services or an elder abuse hot line	17	36.17%
I told my supervisor where I work/volunteer	13	27.66%
Other	12	25.53%
None of the above	1	2.13%

Note: N = 47 for this table.

Table 14. Reasoning for Response to Child Maltreatment

Reasoning	# of Respondents	%
There was no solid evidence of abuse or neglect	10	25.00%
I was afraid I would make things worse	4	10.00%
I was afraid I would damage my relationship with the client/animal owner	5	12.50%
The severity of the situation	12	30.00%
I wanted to follow the law	9	22.50%
I wasn't sure who to call or how to respond	2	5.00%
The age of the child or children involved	12	30.00%
Agency/organization policy	22	55.00%
The attitude of the parents/caretakers	10	25.00%
Other	8	20.00%
None of the above/I don't know/unsure	4	10.00%

Note: N = 40 for this table.

Table15. Reasoning for Response to Intimate Partner Violence

Reasoning	# of Respondents	%
There was no solid evidence of domestic violence	27	49.09%
I was afraid I would make things worse	9	16.36%
I was afraid I would damage my relationship with the client/animal owner	2	3.64%
The severity of the situation	12	21.82%
I wanted to follow the law	9	16.36%
I wasn't sure who to call or how to respond	8	14.55%
I was influenced by agency/organization policy	17	30.91%
The people involved asked me to act a particular way	3	5.45%
Other	7	12.73%
None of the above/I don't know/unsure	5	9.09%

Note: N = 55

Table 16. Reasoning for Response to Vulnerable Adult Maltreatment

Reasoning	# of Respondents	%
There was no solid evidence that something was wrong	16	34.78%
I was afraid I would make things worse	3	6.52%
I was afraid I would damage my relationship with the client/animal owner	5	10.87%
The severity of the situation	19	41.30%
I wanted to follow the law	10	21.74%
I wasn't sure who to call or how to respond	4	8.70%
I was influenced by agency/organization policy	12	26.09%
Other people living in the household	2	4.35%
The person I was concerned about asked me to act a particular way	0	0.00%
Other	7	15.22%
None of the above/I don't know/unsure	2	4.35%

Note: N = 46 for this table.

Table 17. Encountered Multiple Types of Family Violence

Types of Family Violence	Sample	Number of Respondents
Child maltreatment and intimate partner violence	N = 194	29
Child maltreatment and maltreatment of an elderly/vulnerable adult	N = 191	17
Intimate partner violence and maltreatment of an elderly/vulnerable adult	N = 191	21
Child maltreatment, intimate partner violence, and maltreatment of an elderly/vulnerable adult	N = 198	12

Appendix 3. IRB Approval Letter

THE UNIVERSITY of TENNESSEE
KNOXVILLE
Office of Research & Engagement
INSTITUTIONAL REVIEW BOARD (IRB)

1534 White Ave.
Knoxville, TN 37996-1529
865-974-7697
fax 865-974-7400

January 11, 2016

Bethanie Allison Poe,
UTK - Social Work

Re: UTK IRB-16-02746-XM
Study Title: How Do People in Animal Welfare Fields Respond to Family Violence Situations?

Dear Bethanie Poe:

The Administrative Section of the UTK Institutional Review Board (IRB) reviewed your application for the above referenced project. The IRB determined that your application is eligible for **exempt** review under 45 CFR 46 Category 2. In accord with 45 CFR 46.116(d), informed consent may be altered, with the cover statement used in lieu of an informed consent interview. The requirement to secure a signed consent form is waived under 45 CFR 46.117(c)(2). Willingness of the subject to participate will constitute adequate documentation of consent.

Your application has been determined to comply with proper consideration for the rights and welfare of human subjects and the regulatory requirements for the protection of human subjects. This letter constitutes full approval of your application (version 1.2), Poe Recruitment message, Poe Survey_for_People_in_Animal_Related_Fields, and Poe Updated Informed Consent (version 1.0), stamped approved by the IRB on 01/11/2016 for the above referenced study.

In the event that volunteers are to be recruited using solicitation materials, such as brochures, posters, web-based advertisements, etc., these materials must receive prior approval of the IRB.

Any alterations (revisions) in the protocol must be promptly submitted to and approved by the UTK Institutional Review Board prior to implementation of these revisions. You have individual responsibility for reporting to the Board in the event of unanticipated or serious adverse events and subject deaths.

Sincerely,

Colleen P. Gilrane

Colleen P. Gilrane, Ph.D.
Chair

Appendix 4. Informed Consent Statement

Introduction

You are being invited to participate in a survey research project, being conducted by Bethanie A. Poe, a student at the University of Tennessee College of Social Work. This study will be used to determine the types of human welfare situations encountered by people working in animal related fields.

Information on Participant Involvement

This survey consists of questions pertaining to situations encountered while working in animal-related fields. You will be asked to recall how often these situations have occurred within the past year and how you responded to them. The survey should take under thirty minutes to complete. There will be a link at the bottom of the survey to submit your answers.

Risks/Benefits

There is minimal risk beyond that encountered in everyday life involved with this survey. You will be asked questions that may cause you to recall unpleasant events that have occurred while at work. The Veterinary Social Work Helpline, (865) 755-8839, is available at no cost to people involved in animal welfare who need assistance dealing with work related stress. More information is available on the Veterinary Social Work website: www.vetsocialwork.utk.edu . This study will contribute to the overall body of knowledge about human-animal relationships and may contribute to improved trainings for people in animal related professions.

Confidentiality

All survey data are recorded anonymously. Data will be collected by a secured server and encrypted. Data will be stored on a secured site, and only aggregated results will be published. No reference will be made in oral or written reports which could link participants to the study.

Participants should participate with secure computers and internet connection.

Contact Information

If you have questions at any time about the study or the procedures, or you experience adverse effects as a result of participating in this survey, you may contact the researcher, Bethanie Poe at bpoe2@utk.edu. If you have any questions about your rights as a research participant, you may contact the UT Office of Research IRB Compliance Officer at utkirb@utk.edu or (865) 974-7697.

Participation

Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may stop at any point during the survey. You are entitled to skip any questions that you do not want to answer.

CONSENT

You must be 18 years of age to participate in this study. Your completion of the survey implies voluntary consent to participate and confirmation that you are 18 years of age or older. A copy of this information should be printed or saved for your records.

Appendix 5. Recruitment message

Do you work with animals? Please participate in this online research project being conducted by Bethanie A. Poe, a student at the University of Tennessee College of Social Work. Your answers will help researchers to better understand the types of situations people who work with animals encounter while in the field.

All survey responses are anonymous. This survey should take less than 30 minutes to complete. If you have questions regarding this research project, please contact Bethanie Poe: bpoe2@utk.edu.

To complete the survey, please click the following link: (link will be provided once survey is published). Also, please feel free to share this message with others you think might be interested in helping!

Thank you!

Appendix 6. Survey for People in Animal Related Fields

The survey questions were downloaded from Qualtrics into a Microsoft Word file.

Survey for People in Animal Related Fields

Q2 Do you currently work or volunteer in a position that involves animals?

- ❍ Yes (1)
- ❍ No (2)

Q6 As a part of your position, do you have contact with animal owners?

- ❍ Yes (1)
- ❍ No (2)

Q2 In which state do you currently live?

- ❍ Alabama (1)
- ❍ Alaska (2)
- ❍ Arizona (3)
- ❍ Arkansas (4)
- ❍ California (5)
- ❍ Colorado (6)
- ❍ Connecticut (7)
- ❍ Delaware (8)
- ❍ District of Columbia (9)
- ❍ Florida (10)
- ❍ Georgia (11)
- ❍ Hawaii (12)
- ❍ Idaho (13)
- ❍ Illinois (14)
- ❍ Indiana (15)
- ❍ Iowa (16)
- ❍ Kansas (17)
- ❍ Kentucky (18)
- ❍ Louisiana (19)
- ❍ Maine (20)
- ❍ Maryland (21)
- ❍ Massachusetts (22)
- ❍ Michigan (23)
- ❍ Minnesota (24)
- ❍ Mississippi (25)
- ❍ Missouri (26)
- ❍ Montana (27)
- ❍ Nebraska (28)
- ❍ Nevada (29)
- ❍ New Hampshire (30)
- ❍ New Jersey (31)
- ❍ New Mexico (32)
- ❍ New York (33)
- ❍ North Carolina (34)
- ❍ North Dakota (35)
- ❍ Ohio (36)
- ❍ Oklahoma (37)
- ❍ Oregon (38)
- ❍ Pennsylvania (39)

- ❍ Puerto Rico (40)
- ❍ Rhode Island (41)
- ❍ South Carolina (42)
- ❍ South Dakota (43)
- ❍ Tennessee (44)
- ❍ Texas (45)
- ❍ Utah (46)
- ❍ Vermont (47)
- ❍ Virginia (48)
- ❍ Washington (49)
- ❍ West Virginia (50)
- ❍ Wisconsin (51)
- ❍ Wyoming (52)
- ❍ I do not reside in the United States (53)

Answer If 50 States, D.C. and Puerto Rico Tennessee Is Selected

Q8 Which region of Tennessee do you work/volunteer in?

- ❍ Upper East (gray counties) (1)
- ❍ East (green counties) (2)
- ❍ Southeast (yellow counties) (3)
- ❍ Middle (red counties) (4)
- ❍ West (blue counties) (5)
- ❍ South west (light gray counties) (6)

Q8 Which of the following best describes your position? Please select one.

- ❍ Agricultural Extension Agent (1)
- ❍ Animal boarding, grooming, or training (2)
- ❍ Animal Control Officer (3)
- ❍ Animal rescue employee (4)
- ❍ Animal shelter or rescue volunteer (5)
- ❍ City/county animal shelter employee (6)
- ❍ Humane Officer (law enforcement) (7)
- ❍ Veterinarian (8)
- ❍ Veterinary Assistant (9)
- ❍ Veterinary Technician (10)
- ❍ Veterinary Technologist (11)
- ❍ Other (12)

Q10 How long have you been in this position?

- ❍ Less than 6 months (1) _____
- ❍ Less than 1 year (2) _____
- ❍ 1 year (3)
- ❍ 2 years (4)
- ❍ 3 years (5)
- ❍ 4 years (6)
- ❍ 5 years (7)
- ❍ 6 years (8)
- ❍ 7 years (9)
- ❍ 8 years (10)
- ❍ 9 years (11)
- ❍ 10 years (12)
- ❍ 11 years (13)
- ❍ 12 years (14)
- ❍ 13 years (15)
- ❍ 14 years (16)
- ❍ 15 years (17)
- ❍ 16 years (18)
- ❍ 17 years (19)
- ❍ 18 years (20)
- ❍ 19 years (21)
- ❍ 20 years (22)
- ❍ More than 20 years (23)

Q12 As a part of your position, do you investigate allegations of animal abuse or neglect?

- ❍ Yes (1)
- ❍ No (2)

Q13 As a part of your position, do you do welfare checks on animals?

- ❍ Yes (1)
- ❍ No (2)

Q14 As a part of your position, do you respond to reports of nuisance animals? (for example: noise complaints; dogs running loose, etc).

- ❍ Yes (1)
- ❍ No (2)

Q15 Did you receiving training/continuing education related to your position?

- ❍ Yes (1)
- ❍ No (2)

Answer If Did you receiving training/continuing education related to your position? Yes Is Selected

Q16 On which of the following topics did you receive training? (check all that apply)

- ❑ Animal behavior (1)
- ❑ Animal sheltering (2)
- ❑ Animal handling (3)
- ❑ Animal hoarding (4)
- ❑ Animal adoption policy/procedure (5)
- ❑ Euthanasia (6)
- ❑ Compassion fatigue/burnout (7)
- ❑ Vaccinations (8)
- ❑ Animal laws/ordinances (9)
- ❑ Child abuse and neglect (10)
- ❑ Intimate partner violence or domestic violence (11)
- ❑ Elder abuse an neglect (12)
- ❑ Other (13) _____
- ❑ None of the above (14)

Q17 Which best describes where you work/volunteer?

- ❍ City/county animal shelter (1)
- ❍ Animal rescue organization that has a physical building to house animals (2)
- ❍ Animal rescue that uses foster homes (3)
- ❍ Veterinary clinic/hospital (4)
- ❍ Law enforcement agency (5)
- ❍ Other (6) _____

Q18 Approximately how many paid employees does your organization have?

- ❍ No paid employees, volunteers only. (1)
- ❍ 1 to 5 (2)
- ❍ 6 to 15 (3)
- ❍ 16 to 30 (4)
- ❍ 31 to 50 (5)
- ❍ 51+ (6)

Q20 Approximately how many volunteers does your organization have?
- ❍ No volunteers (1)
- ❍ 1 to 5 (2)
- ❍ 6 to 15 (3)
- ❍ 16 to 30 (4)
- ❍ 31 to 50 (5)
- ❍ 51+ (6)
- ❍ I don't know/unsure (7)

Q21 Approximately how much is your organization's annual budget?
- ❍ Under $10,000 (1)
- ❍ $10,000 - $25,000 (2)
- ❍ $25,001 - $50,000 (3)
- ❍ $50,001 - $100,000 (4)
- ❍ $100,001 - $250,000 (5)
- ❍ $250,001 - $500,000 (6)
- ❍ $500.001+ (7)
- ❍ I don't know/Unsure (8)

Q22 Does your organization have policies about making reports to other agencies such as law enforcement, child protective services, or adult protective services?
- ❍ Yes (1)
- ❍ No (2)
- ❍ Unsure/I don't know (3)

Q23 Does your organization require employees/volunteers to document situations they encounter while on the job?
- ❍ Yes (1)
- ❍ No (2)
- ❍ Unsure/I don't know (3)

Answer If Does your organization require employees/volunteers to document situations they encounter while o... Yes Is Selected

Q24 If yes, which best describes your documentation policy?
- ❑ We have to document each case we deal with (1)
- ❑ We document if law enforcement was involved (2)
- ❑ We document if someone was injured (3)
- ❑ Other: (4) _____

Q25 In the past 12 months, have you been in situations in which you were concerned for the safety or well-being of a child or children while at work?

- ❍ Yes (1)
- ❍ No (2)
- ❍ Unsure/ I don't remember (3)

If No Is Selected, Then Skip To In the past 12 months while working i...If Unsure/ I don't remember Is Selected, Then Skip To In the past 12 months while working i...

Q26 How often do you find yourself in situations where you are concerned for the safety or well-being of children while at work?

- ❍ Once or twice a year (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q27 Thinking about the most recent time you were concerned about the safety and/or well-being of a child or children while at work/volunteering, what made you concerned? (check all that apply)

- ❑ Bruises or welts (1)
- ❑ Burns (2)
- ❑ Fractures or broken bones (3)
- ❑ Lacerations,abrasions, and/or cuts (4)
- ❑ Injuries that didn't match the explanation given (5)
- ❑ Children showed painful body movements such as limping, or having trouble sitting or standing (6)
- ❑ Child said s/he was being physically hurt by a parent or caregiver (7)
- ❑ Poor height/weight for age (8)
- ❑ Unclean physical appearance (9)
- ❑ Inadequate food or meal preparation supplies in the household (10)
- ❑ Child was physically frail, weak, or dehydrated (11)
- ❑ Inadequate utilities including lack of heat, water, electricity, or toileting facilities (12)
- ❑ Unsafe or unclean environment including insect infestation or unmaintained animals (13)
- ❑ Something the child or children said (14)
- ❑ Something the parent/caretaker said to you (15)
- ❑ Something the parent/caretaker said to the child/children (16)
- ❑ You saw a parent/caretaker physically harm a child or children (17)
- ❑ Other (18) _____

Q28 Again, thinking of the most recent situation: How did you respond? (check all that apply)

- ❑ I spoke with the parents/caregivers (1)
- ❑ I gave the parents/caregivers information about services in the area (2)
- ❑ I called law enforcement (3)
- ❑ I called emergency medical services (4)
- ❑ I called the Department of Children's Services/a child abuse hot line (5)
- ❑ I told my supervisor where I work/volunteer (6)
- ❑ Other (7) _____
- ❑ None of the above (8)

Q29 What factors influenced your decision to respond the way you did? (check all that apply)

- ❑ There was no solid evidence of abuse or neglect (1)
- ❑ I was afraid I would make things worse (2)
- ❑ I was afraid I would damage my relationship with the client/animal owner (3)
- ❑ The severity of the situation (4)
- ❑ I wanted to follow the law (5)
- ❑ I wasn't sure who to call or how to respond (6)
- ❑ The age of the child or children involved (7)
- ❑ Agency/organization policy (8)
- ❑ The attitude of the parents/caretakers (9)
- ❑ Other (10) _____
- ❑ None of the above/I don't know/unsure (11)

Q30 Thinking about the most recent situation in which you were concerned about the safety and/or well-being of a child/ren: how confident did you feel that you knew what to do in this situation?

- ❍ Not confident at all (1)
- ❍ Somewhat confident (2)
- ❍ Neutral (3)
- ❍ Confident (4)
- ❍ Very Confident (5)

Q31 In the past 12 months while working in this position, have you encountered adult partners you thought were in violent relationships?

- ❍ Yes (1)
- ❍ No (2)
- ❍ Unsure/I don't remember (3)

If No Is Selected, Then Skip To In the 12 months while working in thi...If Unsure/I don't remember Is Selected, Then Skip To In the 12 months while working in thi...

Q35 How often do you find yourself in situations where you are concerned about adult partners being violent toward one another?

- ❍ Once or twice a year (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q32 Think of the most recent time you found yourself in a situation in which you were concerned that partners may be in a violent relationship. What prompted your concern?

- ❑ Bruises or welts (1)
- ❑ Burns (2)
- ❑ Fractures or broken bones (3)
- ❑ Lacerations, abrasions, or cuts (4)
- ❑ One partner threatened to harm or damage things the other cares about (5)
- ❑ One partner threatened someone the other partner cares about, such as a child or other family member (6)
- ❑ One partner threatened to hurt the other (7)
- ❑ One partner threatened to kill himself/herself (8)
- ❑ One partner threatened to kill the other (9)
- ❑ One partner threatened the other with a weapon (10)
- ❑ One partner made threatening faces or gestures at the other (11)
- ❑ Hit or kicked a wall, door, or furniture (12)
- ❑ Drove dangerously with the other in the car (13)
- ❑ Threw, smashed, or broke an object (14)
- ❑ Threw an object at the other (15)
- ❑ Destroyed something belonging to the other (16)
- ❑ Held the other person down, pinning him/her in place (17)
- ❑ Pushed or shoved the other (18)
- ❑ Grabbed the other suddenly or forcefully (19)
- ❑ Shook or roughly handled the other (20)
- ❑ Scratched the other (21)
- ❑ Pulled the other's hair (22)
- ❑ Twisted the other's arm (23)
- ❑ Bit the other (24)
- ❑ Slapped the other with the palm of his/her hand (25)
- ❑ Slapped the other the back of his/her hand (26)
- ❑ Hit the other with an object (27)
- ❑ Punched the other (28)
- ❑ Kicked the other (29)
- ❑ Stomped on the other (30)
- ❑ Choked the other (31)
- ❑ Burned the other with something (32)
- ❑ Something one partner said made you suspicious (33)
- ❑ Other (34) _____

Q29 Again, thinking of the most recent situation involving violent partners; how did you respond? (check all that apply)

- ❑ Gave one partner information about domestic violence services in the area (1)
- ❑ Called law enforcement (2)
- ❑ Called emergency medical services (3)
- ❑ Told my supervisor where I work/volunteer (4)
- ❑ Other (5) _____
- ❑ None of the above (6)

Q31 What factors influenced your decision to respond the way you did? (check all that apply)

- ❑ There was no solid evidence of domestic violence (1)
- ❑ I was afraid I would make things worse (2)
- ❑ I was afraid I would damage my relationship with the client/animal owner (3)
- ❑ The severity of the situation (4)
- ❑ I wanted to follow the law (5)
- ❑ I wasn't sure who to call or how to respond (6)
- ❑ I was influenced by agency/organization policy (7)
- ❑ The people involved asked me to act a particular way (8)
- ❑ Other (9) _____
- ❑ None of the above/I don't know/unsure (10)

Q32 Thinking about the most recent situation in which you were concerned about violent adult partners: how confident did you feel that you knew what to do in this situation?

- ❍ Not confident at all (1)
- ❍ Somewhat confident (2)
- ❍ Neutral (3)
- ❍ Confident (4)
- ❍ Very Confident (5)

Q33 In the 12 months while working in this position, have you been concerned about the safety and/or well-being of elderly and/or disabled adults?

- ❍ Yes (1)
- ❍ No (2)
- ❍ Unsure/I don't remember (3)

If No Is Selected, Then Skip To Please indicate the degree to which y...If Unsure/I don't remember Is Selected, Then Skip To Please indicate the degree to which y...

Q37 How often do you find yourself in situations where you are concerned about the safety or well-being of elderly and/or disabled adults?

- ❍ Once or twice a year (1)
- ❍ Less than Once a Month (2)
- ❍ Once a Month (3)
- ❍ 2-3 Times a Month (4)
- ❍ Once a Week (5)
- ❍ 2-3 Times a Week (6)
- ❍ Daily (7)

Q39 Thinking about the most recent time you were concerned about the safety and/or well-being of an elderly and/or disabled adult while at work/volunteering, what made you concerned? (check all that apply)

- ❑ Bruises or welts (1)
- ❑ Burns (2)
- ❑ Fractures or broken bones (3)
- ❑ Lacerations, abrasions, and/or cuts (4)
- ❑ Injuries that didn't match the explanation given (5)
- ❑ Person showed painful body movements such as limping, or having trouble sitting or standing (6)
- ❑ Person said s/he was being physically hurt by a caregiver (7)
- ❑ Unclean physical appearance (8)
- ❑ Inadequate food or meal preparation supplies in the household (9)
- ❑ Child was physically frail, weak, or dehydrated (10)
- ❑ Inadequate utilities including lack of heat, water, electricity, or toileting facilities (11)
- ❑ Unsafe or unclean environment including insect infestation or unmaintained animals (12)
- ❑ Anxious, trembling, clinging, fearful, scared of someone/something. (18)
- ❑ Something the person said (13)
- ❑ Evidence that a caretaker has withdrawn care suddenly without alternate arrangements (14)
- ❑ Evidence that older adult is left alone in an unsafe environment for extended periods of time without adequate support (15)
- ❑ You saw a caretaker physically harm the older and/or disabled adult (16)
- ❑ Other (17) _____

Q40 Again, thinking of the most recent situation involving elderly and/or disabled adults; How did you respond? (check all that apply)

- ❑ Gave the person information about who they could call for help (1)
- ❑ Helped the person contact relatives or friends for assistance (2)
- ❑ Called law enforcement (3)
- ❑ Called emergency medical services (4)
- ❑ Called Adult Protective Services or an elder abuse hot line (5)
- ❑ I told my supervisor where I work/volunteer (6)
- ❑ Other (7) _____
- ❑ None of the above (8)

Q42 What factors influenced your decision to respond the way you did to the situation involving an elderly and/or disabled adult? (check all that apply)

- ❑ There was no solid evidence that something was wrong (1)
- ❑ The severity of the person's disability (2)
- ❑ I was afraid I would make things worse (3)
- ❑ I was afraid I would damage my relationship with the client/animal owner (4)
- ❑ The severity of the situation (5)
- ❑ I wanted to follow the law (6)
- ❑ I wasn't sure who to call or how to respond (7)
- ❑ I was influenced by agency/organization policy (8)
- ❑ Other people living in the household (9)
- ❑ The person I was concerned about asked me to act a particular way (10)
- ❑ Other (11) _____
- ❑ None of the above/I don't know/unsure (12)

Q43 Thinking about the most recent situation in which you were concerned about the safety or well-being of an elderly and/or disabled adult: how confident did you feel that you knew what to do in this situation?

- ❍ Not confident at all (1)
- ❍ Somewhat confident (2)
- ❍ Neutral (3)
- ❍ Confident (4)
- ❍ Very Confident (5)

Q59 Please indicate the degree to which you disagree or agree with these statements.
Strongly Disagree (1); Disagree (2); Neither Agree nor Disagree (3); Agree (4);Strongly Agree (5)

- There are places in my geographical area for children and families to get help. (1)
- It is easy for children and families to get help when they need it. (2)
- There are places in my geographical area for people trying to get help because of a violent relationship. (3)
- It is easy for people to get help to deal with a violent relationship when they need it. (4)
- There are places in my geographical area for older and/or disabled adults who need help. (5)
- It is easy for older and/or disabled adults to get help when they need it. (6)

Q50 1. What is your gender?

- ❍ Male (1)
- ❍ Female (2)
- ❍ Other (3) _____

Q56 What is your age?

Q52 What is your marital status?

- ❍ Single, never married (1)
- ❍ Married or domestic partnership (2)
- ❍ Widowed (3)
- ❍ Separated (4)
- ❍ Divorced (5)

Q52 How do you describe your race?

- ❑ Asian or Pacific Islander (1)
- ❑ Black or African American (2)
- ❑ Caucasian/White (3)
- ❑ Hispanic or Latino (4)
- ❑ Native American or American Indian (5)
- ❑ Other (6) _____
- ❑ Prefer not to answer (7)

Q54 What is the highest level of education you have completed?

- ❍ Less than high school (1)
- ❍ High school diploma or GED (2)
- ❍ Associates degree (for example: A.A., A.S., etc) (3)
- ❍ Bachelor's degree (for example: B.A, B.S., etc) (4)
- ❍ Master's degree (for example: M.A., M.S., MEng., M.S.W, M.B.A., etc) (5)
- ❍ Professional degree beyond a bachelor's degree (for example: MD, DDS, DVM, LLB, JD, etc) (6)
- ❍ Doctorate degree (for example: PhD, EdD) (7)

Vita

Bethanie Allison Poe is the only child of George V. Poe and Bobbie L. Poe. She graduated from Sullivan South High School in Kingsport, TN 2001 and went on to study pre-graduate psychology with a minor in English at Middle Tennessee State University (MTSU) in Murfreesboro, TN. She graduated Magna cum Laude from MTSU in 2005, and from there went to the University of Tennessee, Knoxville (UTK) where she earned her Masters of Science in Social Work in 2007. It was there Bethanie was introduced to Veterinary Social Work and began her academic study of the Link between human and animal violence. Bethanie returned to UTK to pursue her PhD in social work in 2008, choosing to continue her studies with Veterinary Social Work. Bethanie has experience working in a domestic violence shelter, in child protective services, and mental health education as well as many years involved in animal rescue as a volunteer. Bethanie is currently employed as a program specialist at the Tennessee Coalition to End Domestic & Sexual Violence in Nashville, TN.