THE LINK BETWEEN RECURRENT CHILDHOOD ANIMAL CRUELTY
AND RECURRENT ADULT INTERPERSONAL VIOLENCE

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In the early 1960s, researchers began to examine the potential link between childhood animal cruelty and future interpersonal violence. Findings since then have been inconsistent in establishing a relationship between the two. This may be due to researchers failing to measure the recurrency of childhood animal abuse and the recurrency of later violent acts committed in adulthood. The current study, using data from 257 inmates at a medium-security prison in a Southern state, is a replication of research conducted by Tallichet and Hensley (2004) and Hensley, Tallichet, and Dutkiewicz (2009), which examined this recurrency issue. The only statistically significant predictor of recurrent adult interpersonal violence in this study was recurrent childhood animal cruelty. Inmates who engaged in recurrent childhood animal cruelty were more likely to commit recurrent adult interpersonal violence. Respondents’ race, education, and childhood residence were not significant predictors of the outcome variable.
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# TABLE OF CONTENTS

ABSTRACT................................................................................................................................. iv  
ACKNOWLEDGEMENTS............................................................................................................. v  
LIST OF TABLES......................................................................................................................... vii  

CHAPTER  

I. INTRODUCTION ......................................................................................................................... 1  
II. LITERATURE REVIEW ........................................................................................................... 6  
III. METHODOLOGY .................................................................................................................... 13  
    Participants.............................................................................................................................. 13  
    Dependent Variable .............................................................................................................. 14  
    Independent Variable .......................................................................................................... 16  
    Control Variables ................................................................................................................. 16  
    Data Analysis ...................................................................................................................... 16  
IV. RESULTS ............................................................................................................................... 17  
V. DISCUSSION .......................................................................................................................... 19  

REFERENCES ............................................................................................................................. 23  

APPENDIX  

A. IRB MEMORANDUM............................................................................................................... 25  
B. QUESTIONNAIRE .................................................................................................................. 27  

VITA.............................................................................................................................................. 30  

vi
LIST OF TABLES

1 Population and Sample Characteristics.................................................................15
2 Descriptive Statistics – Independent and Dependent Variables \( (n = 257) \)........18
3 OLS Regression Summary \( (n = 123) \)........................................................................18
CHAPTER I
INTRODUCTION

Since the domestication of animals thousands of years ago, pet and farm animals have been embedded in our way of life. A long standing practice to classify these animals as property has always existed, resulting in animals having no legal standing (Favre, 2013). Therefore, individuals could cause harm or mistreat their animals, since these creatures were viewed as personal property in the eyes of the law. This mindset started to shift in the mid-nineteenth century with the formation of the American Society for the Prevention of Cruelty to Animals (ASPCA) under the presidency of Henry Bergh. This organization was formed for the protection of animals and created specialized law enforcement officers who arrested persons who violated anti-cruelty laws. Bergh helped pass the 1867 New York Anti-Cruelty Act, which criminalized overworking, abandoning, or failing to provide sufficient food or water for animals (Favre, 2013). Although the 1867 act only considered these crimes misdemeanors, this legislation led the way for many of our current animal cruelty laws.

Although such legislation was used to protect animals from abuse and neglect, it took another century for academicians and researchers to begin exploring the relationship between childhood animal cruelty and interpersonal violence during adulthood. In 1964, Anthropologist Margaret Mead suggested that torturing small animals as a child was an indicator of individuals who could develop an assaultive character and may have the potential to harm humans. She further argued that if a child committed animal cruelty then it could “prove a diagnostic sign, and
that such children, diagnosed early, could be helped instead of being allowed to embark on a long career of episodic violence and murder” (Mead, 1964, p. 22).

Two decades later, her writings influenced the American Psychiatric Association (APA) to add animal cruelty to the Diagnostic and Statistical Manual of Mental Disorders-III R (DSM-III R) in 1987 and was retained in the 2013 Diagnostic and Statistical Manual of Mental Disorders 5 (DSM 5) as a symptom of conduct disorder (American Psychiatric Association, 1987; American Psychiatric Association, 2013). Within the DSM 5, conduct disorder is defined as “a repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated” (American Psychiatric Association, 2013, p. 469). Three of 15 listed behaviors must be exhibited by a child within the past 12 months and at least one must have been exhibited within the past six months. These behaviors include: 1) often bullies or intimidates others; 2) often initiates physical fights; 3) has used a weapon that can cause serious harm to others; 4) has been physically cruel to people; 5) has been physically cruel to animals; 6) has stolen while confronting a victim; 7) has forced someone into sexual activity; 8) has deliberately engaged in fire setting with the intention of causing serious damage; 9) has deliberately destroyed others’ property; 10) has broken into someone else’s house, building, or car; 11) often lies to obtain goods or favors or to avoid obligation; 12) has stolen items of nontrivial value without confronting a victim; 13) often stays out at night despite parental prohibitions, beginning before age 13 years; 14) has run away from home overnight at least twice while living in the parental or parental surrogate home, or once without returning for a lengthy period; and 15) is often truant from school, beginning age 13 years (American Psychiatric Association, 2013, pp. 469-470). As stated, among all of the behaviors listed, being physically
cruel to animals is included as one specific act that can be used to diagnose a child with conduct disorder.

Individuals who have been diagnosed with conduct disorder have the potential to develop antisocial personality disorder. Antisocial personality disorder is defined as a pervasive pattern of exploiting or violating the rights of others, occurring since age 15, as indicated by three (or more) of the following seven diagnostic criteria: 1) failure to conform to social norms with respect to lawful behaviors, as indicated by repeatedly preforming acts that are grounds for arrest; 2) deceitfulness, as indicated by repeated lying, use of aliases, or conning others for personal profit or pleasure; 3) impulsivity or failure to plan ahead; 4) irritability and aggressiveness, as indicated by repeated physical fights or assaults; 5) reckless disregard of safety of self or others; 6) consistent irresponsibility, as indicated by repeated failure to sustain consistent work behavior or honor financial obligations; and 7) lack of remorse, as indicated by being indifferent to or rationalizing having hurt, mistreated, or stolen from another (American Psychiatric Association, 2013, p. 659). Individuals diagnosed with antisocial personality disorder must be at least 18 years of age.

One such person who exhibited antisocial personality disorder and engaged in childhood animal cruelty was Jeffery Dahmer. As a young child, Dahmer would collect the dead bodies of animals in his neighborhood and dissect them. As his fascination and dark fantasies increased, he began capturing live animals. He would skin these animals, soak their bones in acid, and mount their heads on stakes in his backyard. Eventually, he would turn to killing humans and replicated many of the same methods he had used on animals on his human victims, removing the skin, soaking their bones in acid, and eating their flesh (Wright & Hensley, 2003).
A case such as this shows that childhood animal cruelty and future interpersonal violence may go hand-in-hand. This link has become an area of increasing research over the past two decades with inconclusive results. Merz-Perz, Heide, and Silverman (2001), for example, found that inmates who had been convicted of violent crimes as adults were more likely to have committed childhood animal cruelty as compared to non-violent inmates. Tallichet and Hensley (2004) and Hensley et al. (2009) also found a link between childhood animal cruelty and adult interpersonal violence. Such findings show that children who commit animal cruelty have a higher likelihood of committing interpersonal violence later in life. Walters (2014) further found that committing animal cruelty is just as effective at predicting both aggressive and non-aggressive offending.

Arluke, Levin, Luke, and Ascione (1999) also established a link between childhood animal cruelty and future interpersonal violence; however, they did not find a specific time order between the two events. In fact, they found that childhood animal cruelty was just as likely to follow violence as it was to precede it. Miller and Knutson (1997), on the other hand, did not find a significant relationship between inmates’ passive or active histories of animal cruelty and the types of crimes they later committed.

As shown, these studies have produced inconsistent and inconclusive results in terms of the relationship between childhood animal cruelty and future interpersonal violence. The current study continues to explore this potential link by examining 257 violent and non-violent inmates from a Southern state. Demographic characteristics, (race, educational level, and childhood residence) and recurrent acts of childhood animal cruelty are used to predict later violence against humans among this sample. This research is a replication of the studies conducted by
Tallichet and Hensley (2004) and Hensley et al. (2009) and asks the question, do recurrent acts of childhood animal cruelty predict recurrent acts of adult interpersonal violence?
CHAPTER II
LITERATURE REVIEW

Over the past five decades, several scholars have examined the link between childhood animal cruelty and later violence toward humans. Results of these studies have been inconsistent with some researchers finding a significant relationship between the two (Arluke & Madfis, 2014; Gleyzer, Felthous, & Holzer, 2002; Hensley et al., 2009; Merz-Perz & Heide, 2004; Merz-Perz et al., 2001; Ressler, Burgess, & Douglas, 1988; Tallichet & Hensley, 2004; Verlinden, Hersen, & Thomas 2000; Wright & Hensley, 2003). An additional study suggested that childhood animal cruelty was equally correlated with violent and non-violent offending toward humans (Walters, 2014) while another found a link, but no established time order between the two behaviors (Arluke et al., 1999). One failed to find such a link altogether (Miller & Knutson, 1997). Although these findings have been inconsistent, scholarly interest in this potential relationship between children who commit animal cruelty and then go on to commit violence against humans continues.

MacDonald (1961) reviewed over 400 post-hoc psychiatric examinations from serial murderers, mass killers, and death row inmates to understand why these individuals committed murder. He was the first researcher to focus on a triad of childhood characteristics (i.e., enuresis, fire setting, and animal cruelty) in an attempt to understand murder. He initially believed any or all of these characteristics had the potential to predict which children would commit murder
during their adulthood. His findings, however, revealed no significant relationship between any of the triad behaviors (including animal cruelty) and homicide.

Five years later, Hellman and Blackman (1966) used MacDonald’s triad to determine if a child who possessed these characteristics could commit future violent crimes. Eighty-four incarcerated males were interviewed at an acute psychiatric treatment center in St. Louis, Missouri to ascertain their childhood histories of triad behaviors. The prisoners were divided into two groups: 31 individuals who committed aggressive or violent crimes and 53 who committed nonaggressive felonies or misdemeanors. Of the 31 aggressive inmates, 16 had a history of animal cruelty while only nine of the nonaggressive inmates did. Hellman and Blackman (1966) argued that the presence of these characteristics within a child may lead to a greater propensity for future violence toward humans.

Throughout the next 20 years, several researchers continued to explore the link, resulting in a meta-analysis of these studies by Felthous and Kellert in 1987. They critically examined 15 previous studies that had explored the link between childhood animal cruelty and later interpersonal violence. Ten of these studies were unable to identify a significant relationship between the two behaviors. Felthous and Kellert (1987) argued that this failure to find such a link could be based on three reasons. First, some of the studies did not specifically define what animal cruelty or interpersonal violence was, leaving various actions to be excluded from being considered cruel or violent. Second, many of the studies that found no link used the chart method of review rather than in-depth interviews when collecting the data. Lastly, single rather than recurrent acts of animal cruelty and interpersonal violence were measured. The five remaining studies in their meta-analysis which uncovered a link measured recurrency.
Verlinden et al. (2000) examined the possible link between childhood animal cruelty and future acts of interpersonal violence among school shooters. In their examination of 11 individuals who carried out such shootings, five had histories of committing animal cruelty. Specifically, before Kipland “Kip” Kinkel murdered his parents and shot up a school in Springfield, Oregon, he boasted about killing cats and using explosives to blow up a cow. Eric Harris and Dylan Klebold, the perpetrators of the Columbine shooting, told friends how they had mutilated animals on several occasions. Luke Woodham tortured and killed his pet dog before murdering his mother and two of his classmates.

Another study focusing on school shooters and their histories of animal cruelty was conducted by Arluke and Madfis (2014). They examined 23 previous cases of school shootings where two or more individuals were killed and the shooter was 20 years of age or younger from 1988 to 2012. Ten of the 23 shooters had prior histories of animal cruelty. Nine of these ten individuals used up-close and personal methods of abuse, such as burning or drowning. Arluke and Madfis (2014) found that committing animal cruelty with these methods was a likely precursor to later extreme violence than other methods used to abuse animals.

In addition to school shootings, researchers have also explored the relationship between childhood animal cruelty and other forms of murder, including sexual homicide and serial murder. Ressler et al. (1988) examined the behavioral characteristics of 36 sexual murderers, all but seven of whom were serial murders. Of the 36 sexual murderers, 28 were assessed for certain childhood characteristics, including animal cruelty. Thirty-six percent of these individuals had committed animal cruelty as children, 46% had committed animal cruelty as adolescents, and 36% engaged in cruel acts toward animals into their adulthood.
Wright and Hensley (2003) also found that many serial killers had childhood histories of animal cruelty. In fact, in 75 (21%) of 354 cases, the serial killer had such a history. Five case studies were used to support the graduation hypothesis since the serial murderers who committed animal cruelty as children graduated to using violence against humans as adults. These murderers vented their anger toward animals in an attempt to relieve their perceived frustration and humiliation “caused” by others around them. They eventually shifted their aggression from animals to humans (Wright & Hensley, 2003).

As previously stated, individuals with anti-personality disorder (APD) sometimes commit repeated acts of interpersonal violence. Therefore, Gleyzer et al. (2002) wanted to examine the relationship between recurrent animal abuse and substance abuse and various mental health issues, including APD. By comparing 48 men with histories of animal cruelty and 48 men without, they found that animal cruelty had a significant relationship to APD, antisocial personality traits, and polysubstance abuse. No association, however, was found between animal cruelty and mental retardation, psychotic disorders, or alcohol abuse.

As indicated by these studies, some individuals with a history of violent behavior toward others have abused animals as children. Merz-Perz and Heide (2004) and Merz-Perz et al., (2001) found similar results after interviewing 45 violent and 45 non-violent inmates within a Florida maximum-security prison. Violent inmates were more likely to have abused animals when they were younger when compared to non-violent inmates (56% and 20%, respectively). Another finding was that the methods used by violent offenders while committing childhood animal cruelty were similar to the ways in which they had harmed humans during their adulthood, a finding supported by Wright and Hensley (2003).
Many of the previously discussed studies have not employed inferential statistics to uncover if a link truly exists. However, Tallichet and Hensley (2004) wanted to address whether recurrent acts of childhood animal cruelty predicted future convictions for recurrent, adult interpersonal violence among a sample of 261 male inmates in a Southern state using such statistics. Inmates who had engaged in childhood animal cruelty were more likely to have been convicted of repeated acts of violence against humans during their adulthood. This finding was supported by Hensley et al. (2009) when they found a significant relationship between recurrent childhood animal abuse and the commission of recurrent interpersonal violence as adults among a sample of 180 inmates from a different Southern state while controlling for the effects of race, education, and childhood residence.

Walters (2014) found a link between childhood animal cruelty and violent behavior; however, he also found that a link existed between such cruelty and non-violent behavior. Using data collected from the 11-wave Pathways to Desistance study, which surveyed 1,154 male and 182 female individuals who had been adjudicated delinquent between the ages of 14 to 18, he found that childhood animal cruelty was at least as effective in predicting non-aggressive behavior as it was in predicting aggressive behavior. The nature of the animal cruelty and offending relationship was more general than specific in that childhood animal abuse did not specifically lead to violence. One major limitation of the study was the failure to measure repeated or recurrent acts of animal cruelty committed by the respondents. Walters (2014) noted that, “The use of a dichotomous measure of animal cruelty in which the frequency, intensity, age of onset, and degree of nonspecific sadism were not taken into account is probably the greatest
limitation of this study” (p. 247). This was one of the major issues when examining the link as previously discussed by Felthous and Kellert (1987).

Unlike Walters (2014), Arluke et al. (1999) established a relationship between animal cruelty and future acts of violence, but failed to find a time order between the events. They reviewed 153 animal abusers’ official records and compared this information to the records of 153 control subjects’, finding that the individuals who had been cruel to animals in the past showed a higher propensity for violence toward humans as adults. Those same individuals were also more likely to have committed property, drug, and public disorder offenses. Thus, the researchers found no specific time order between animal cruelty and later interpersonal violence. They did, however, find that childhood animal abuse was just as likely to follow violence as it was to precede it. This finding cast doubt on the graduation hypothesis, which suggests individuals who abuse animals as children are more likely to commit later acts of aggression toward humans. Since Arluke et al. (1999) found no time order for animal abuse and later violence, the generalized deviance theory was supported. Finding that animal cruelty happens around the same time as violence toward humans, no progression from one to the other was established. One limitation of this study in establishing causal ordering was the inability of the researchers to obtain the criminal records of individuals younger than 17 years of age. Without this information, establishing that an individual abused animals as a child was problematic. Additionally, the researchers only examined singular acts of interpersonal violence.

Unlike all of the previous studies discussed, Miller and Knutson (1997) found no link between childhood animal cruelty and later violence toward humans. Their study of 314 male and female prisoners and a separate study of 308 undergraduate students revealed no significant
relationship between their passive or active histories of animal cruelty and the types of crimes they committed. Questionnaires were also provided to 308 undergraduate students in order to ascertain their exposure levels to animal cruelty and violence. Miller and Knutson (1997) pointed out two limitations that could have affected their findings. First, within both sample populations, there was a high base rate of animal cruelty present in the respondents’ childhood histories. Second, when measuring the presence of animal cruelty, the scores were positively skewed and leptokurtic. Thus, it was more difficult to find a link between animal cruelty and later interpersonal violence.

The current study will replicate research conducted by Tallichet and Hensley (2004) and Hensley et al. (2009) in an attempt to further understand the potential link between childhood animal cruelty and adult interpersonal violence. Based upon their research, it is hypothesized that the race, education and the childhood residence of respondents will not have a significant relationship with interpersonal violence. However, it is hypothesized that recurrent childhood animal cruelty will be significantly linked to adult interpersonal violence.
CHAPTER III
METHODOLOGY

The primary goal of the present study was to reexamine the link between recurrent childhood animal cruelty and recurrent later interpersonal violence. An item in the survey defined animal so that inmates could choose between hurting or killing a pet, stray, or farm animal and listing the exact type(s) of animals (i.e., dog, cat, horse, etc.) that they hurt or killed. Animal cruelty included any action where the respondent hurt or killed animals when they were children (other than for hunting). This is consistent with the most frequently used definition of animal cruelty by Ascione (1993) when he described animal cruelty as “Socially unacceptable behavior that intentionally causes unnecessary pain, suffering, or distress to and/or the death of, an animal” (p. 228). Respondents who reported killing animals for food were not considered animal abusers as this is socially condoned behavior.

Participants

After obtaining approval and being granted a waiver of signed informed consent from the state department of corrections and the university’s Institutional Review Board, researchers drove to a medium-security Southern correctional facility for men and delivered the self-administered questionnaires in February 2010. The informed consent stated that the questionnaires were confidential and the respondents’ participation was voluntary. In addition,
the state department of corrections agreed not to open any of the surveys prior to the inmates mailing them. Inmates were informed that it would take approximately 20 minutes to complete the 26-item questionnaire and were asked to return their completed questionnaires in a stamped, self-addressed envelope within one month of distribution. No incentives were provided for completion of the survey. The researchers contacted the facility after 30 days to make sure all completed surveys had been mailed. Of the 2,315 inmates incarcerated in the prison, a total of 257 agreed to participate in the study, yielding a response rate of 11.1% (as each inmate received a questionnaire). Although this response rate appears low, most prison studies dealing with sensitive issues attract fewer respondents than other surveys (Hensley et al., 2009; Tallichet & Hensley, 2004). The questionnaire was based off previous surveys constructed by Tallichet and Hensley (2004).

Table 1 displays the characteristics of the prison population and the sample. A comparison of the racial composition and age distribution of the sample and the prison population revealed no significant differences. However, a significant difference was found with respect to type of crime committed; inmates who committed personal crimes (i.e., murder/attempted murder, rape/attempted rape, assault, and robbery) were over-represented in the sample as compared to the prison population.

Dependent Variable

Inmates were asked a series of questions regarding their interpersonal violence histories, which included the following: (a) “Have you ever committed murder or attempted murder?”; (b)
“Have you ever committed rape or attempted rape?”; (c) “Have you ever committed assault?”; and (d) “Have you ever committed robbery?” These questions were coded 0 = no and 1 = yes.

Table 1 Population and Sample Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Prison Population¹</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Race:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>1,212</td>
<td>54.7</td>
</tr>
<tr>
<td>Other</td>
<td>1,003</td>
<td>45.3</td>
</tr>
<tr>
<td>Type of Offense:*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violent Crime</td>
<td>1,167</td>
<td>52.7</td>
</tr>
<tr>
<td>Other Crime</td>
<td>1,048</td>
<td>47.3</td>
</tr>
<tr>
<td>Median Age</td>
<td></td>
<td>38 years</td>
</tr>
</tbody>
</table>

¹Prison population at time of study was 2315 and is currently 2215.

*Significant difference found between the two groups.

More importantly, they were asked how many times they had committed each of these interpersonal crimes. To develop a cumulative score of recurrent interpersonal violence, we added the number of times each inmate had committed these crimes. The scores ranged from 0 to 16 with average of 3.57. The cumulative score for each inmate was then used as the dependent variable.
Independent Variable

Respondents were asked how many times they had hurt or killed animals during their childhood. As previously stated, recurrency of childhood animal cruelty is important in understanding the link between it and adult interpersonal violence. The scores ranged from 1 to 20 with an average of 5.86 acts.

Control Variables

Inmates were asked three questions regarding their demographic characteristics. Respondents’ race was recoded so that 0 = nonwhite and 1 = white. Education was recoded so that 0 = less than a high school education and 1 = high school graduate or higher education. Childhood residence was coded so that 0 = rural area and 1 = urban area.

Data Analysis

For the purposes of this study, we first examine the descriptive statistics for each of the control, independent, and dependent variables. Next, we will examine the relationships between the control and independent variables and the outcome measure. Finally, in order to examine the explanatory power of the independent variables on the dependent variable, an Ordinary Least Squares (OLS) multiple regression analysis will be performed. OLS is used to estimate the unknown parameters in a linear regression model. OLS assumes the normality of the outcome variable and
CHAPTER IV
RESULTS

Of the 257 respondents, 126 inmates had engaged in childhood animal cruelty. Table 2 presents the descriptive statistics for the independent and dependent variables. More than half of the respondents were white, lived in rural areas, and had at least graduated from high school. Inmates who reported hurting or killing animals during their childhood did so on average 5.68 times. Of the 175 inmates who had engaged in interpersonal violence as adults, they had done so an average of 3.57 times.

Independent sample t-tests were performed for each of the control variables and their relationship with the dependent variable. No significant relationships were found between the control variables and the outcome measure. However, there was a significant relationship between the key independent variable and the dependent variable. The number of times an inmate hurt or killed an animal during their childhood and their interpersonal histories of violence as adults was positively correlated ($r = .49, p < .01$), as expected.

According to the OLS Regression model in Table 3, respondents who engaged in recurrent childhood animal cruelty were more likely to engage in later interpersonal violence. However, none of the control variables were significant. The independent and control variables accounted for 22% of the total variance in the model.
Table 2 Descriptive Statistics – Independent and Dependent Variables ($n = 257$)

<table>
<thead>
<tr>
<th>Race</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>146 (56.8%)</td>
<td></td>
</tr>
<tr>
<td>Non-white</td>
<td>111 (43.2%)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
<td>109 (42.4%)</td>
<td></td>
</tr>
<tr>
<td>High school or greater</td>
<td>148 (57.6%)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Residence</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>132 (51.4%)</td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>125 (48.6%)</td>
<td></td>
</tr>
</tbody>
</table>

Times Committed Animal Cruelty: $x = 5.86$ S.D. = 4.72 Missing = 133

Interpersonal Violence: $x = 3.57$ S.D. = 4.84 Missing = 0

Table 3 OLS Regression Summary ($n = 123$)

<table>
<thead>
<tr>
<th>Variable</th>
<th>b</th>
<th>S.E.</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrent Childhood Animal Cruelty</td>
<td>.61</td>
<td>.10</td>
<td>.49*</td>
</tr>
</tbody>
</table>

Adjusted $R^2$ .22
$F$ value 9.82
Significance .00

* Denotes statistical significance at the .05 level.

Coding of Independent Variables: Race ($0 =$ White, 1 = non-White); Education ($0 =$ Less than high school, 1 = high school graduate or greater); Residence ($0 =$ rural area; 1 = urban area); How Many Times Have You Hurt or Killed Animals Other Than for Hunting? (continuous).

Coding of Dependent Variable: Cumulative Score of Adult Interpersonal Violence (continuous).
CHAPTER V
DISCUSSION

The link between childhood animal cruelty and future interpersonal violence has become a topic of increasing interest over the past several decades. Although the literature has been inconclusive, many researchers have successfully established a link between childrens’ acts of animal abuse and their future histories of violence toward humans (Arluke & Madfis, 2014; Gleyzer et al., 2002; Hensley et al., 2009; Merz-Perz & Heide, 2004; Merz-Perz et al., 2001; Ressler et al., 1988; Tallichet & Hensley, 2004; Verlinden et al., 2000; Wright & Hensley, 2003). Like prior research, the current retrospective study found a statistically significant relationship between recurrent childhood animal cruelty and recurrent adult interpersonal violence. The control variables – race, education, and childhood residence – were not significantly related to the outcome variable. These results are consistent with the findings from Tallichet and Hensley (2004) and Hensley et al. (2009).

The findings suggest that respondents who committed childhood animal cruelty may have become desensitized to other acts of violence and therefore, participated in criminal behavior in their adulthood. In fact, all of the respondents in the current study who had engaged in childhood animal cruelty had done so prior to committing any acts of reported interpersonal violence. This finding lends support for the graduation hypothesis described earlier.
Although a link was found between recurrent acts of childhood animal abuse and recurrent acts of violence toward humans, this study has several limitations. First, the data were based upon self-reports, allowing inmates the opportunity to be untruthful or deceitful in disclosing their past deviant or criminal acts. However, studies that rely on self-report data and have compared that data to official records have observed consistent findings (Hindelang, Hirschi, & Weis, 1979; Huizinga & Elliott, 1986). Second, an additional shortfall of this study was the use of the Uniform Crime Report’s crime categories within the questionnaires used to describe the various interpersonal crimes. Incarcerated individuals may not be able to understand such legalistic terminology. Lastly, the 11.1% response rate for inmate participation was relatively low since the research was conducted using the pencil and paper method. This data collection method could have excluded individuals who are illiterate and therefore, the current findings may not generalize to either the state or U.S prison population. Additionally, due to the sensitive nature of the topic, it is possible that inmates opted not to answer these questions as they did not want to divulge previous deviant and/or criminal acts.

An approach that future studies may use in attempting to expand upon the predictive value of childhood animal cruelty on future interpersonal violence is to examine the life experiences of both incarcerated and non-incarcerated individuals. A longitudinal study could be beneficial by examining such experiences as no such study has been published addressing the recurrent nature of childhood animal cruelty and its relationship to adult aggression. In particular, researchers could examine whether children who have experienced mental, physical, and/or sexual abuse and who commit childhood animal cruelty are more likely to perpetrate crimes against humans as adults.
Studies that have found a significant relationship between childhood animal cruelty and future adult violence, such as this one, indicate that certain policies should be implemented in order to better understand adolescent acts of animal abuse as predictors of later criminal behavior. As previously stated, the DSM III-R added animal cruelty as a symptom of conduct disorder in 1987 (American Psychiatric Association, 1987). Because of its significance, animal cruelty continues to be used as a criterion for diagnosing a child with conduct disorder (American Psychiatric Association, 2013). More recently, certain policies have been put in place that attempt to track animal abuse and prevent later interpersonal violence. For example, Tennessee became the first state to implement an animal cruelty registry (TN.gov, 2016). Although certain cities maintain animal abuse registries, on January 1, 2016 in Tennessee, individuals who are convicted of their first offense of animal cruelty will remain on a TBI animal abuse registry for two years. Any subsequent conviction will place the offender on the list for five years. While on the registry, offenders will be prohibited from adopt any animal from a shelter (TN.gov, 2016).

Additionally, the FBI added animal cruelty to the Uniform Crime Report (UCR) (The Humane Society of the United States, 2014). The FBI implemented the changes in 2015 and started collecting data in January 2016. Prior to this, the FBI included animal cruelty under an “all other offenses” category. It will now be considered a crime against society and includes four categories: simple/gross neglect, intentional abuse and torture, organized abuse (animal fighting), and animal sexual abuse.

Collecting such data on a statewide and national level will allow a more accurate measure of the rates of animal abuse. This will also allow law enforcement to provide increased resources
and funding to the professionals who address cases of cruelty toward animals (The Humane Society of the United States, 2014). These policies clearly suggest that childhood animal cruelty is a potential warning sign for later violence toward humans and is often viewed as socially unacceptable.

The findings of the current study, as well as previous research, will assist in our understanding the link between childhood animal cruelty and later interpersonal violence. Hopefully, this will lead to a more in-depth understanding of what causes children to abuse animals and what steps should be taken to prevent these individuals from committing adult violence. With interest in the link increasing and more research being conducted examining the relationship between the two, more efficient and adequate approaches addressing the issue of childhood animal cruelty and future interpersonal violence are needed. In conclusion, it is important to recognize that childhood animal cruelty, regardless of it is being committed at the same time as other interpersonal offenses, is a clear warning sign that parents, policy makers, mental health professionals, and law enforcement must continuously confront.
REFERENCES


APPENDIX A
IRB MEMORANDUM
MEMORANDUM

TO: Caleb E. Trentham  
    Dr. Chris Hensley

FROM: Lindsay Pardue, Director of Research Integrity  
       Dr. Amy Doolittle, IRB Committee Chair

DATE: February 10, 2016

SUBJECT: IRB #16-003: Recurrent Childhood Animal Cruelty and Interpersonal Violence

The IRB Committee Chair has reviewed and approved your application and assigned you the IRB number listed above. You must include the following approval statement on research materials seen by participants and used in research reports:

The Institutional Review Board of the University of Tennessee at Chattanooga (FWA00004149) has approved this research project #16-003.

Since your project has been deemed exempt, there is no further action needed on this proposal unless there is a significant change in the project that would require a new review. Changes that affect risk to human subjects would necessitate a new application to the IRB committee immediately.

Please remember to contact the IRB Committee immediately and submit a new project proposal for review if significant changes occur in your research design or in any instruments used in conducting the study. You should also contact the IRB Committee immediately if you encounter any adverse effects during your project that pose a risk to your subjects.

For any additional information, please consult our web page http://www.utc.edu/irb or email irbinfo@utc.edu

Best wishes for a successful research project.
APPENDIX B

QUESTIONNAIRE
I would like to begin by asking you several background questions. Please circle or fill in the best response for each question. Please do not put your name or other identifiers on this survey. After you complete the survey, return it in the stamped, self-addressed envelope. Thank you.

How old are you?

How do you describe yourself?

1. White  
2. African American/Black  
3. Hispanic  
4. Other (______)

What is the highest level of schooling you have completed?

1. 8th grade or less  
2. Some high school  
3. Completed high school  
4. Some college  
5. Completed college

Where did you grow up?

1. Rural area (small town/farm)  
2. Urban area (city/suburb)

Were you ever mentally abused as a child?

1. Yes  
2. No

Were you ever physically abused as a child?

1. Yes  
2. No

Have you ever committed murder or attempted murder?

1. Yes  
2. No

If yes, at what age did you first commit murder? _________  
How many times?

Have you ever committed rape or attempted rape?

1. Yes  
2. No

If yes, at what age did you first commit rape? _________  
How many times?

Have you ever committed assault?

1. Yes  
2. No

If yes, at what age did you first commit assault? _________  
How many times?

Have you ever committed robbery?

1. Yes  
2. No

If yes, at what age did you first commit robbery? _________  
How many times?

**The Following Questions DO NOT Relate to Hunting or Accidents:**

Did you ever see anyone hurt or kill an animal?

1. Yes  
2. No

How old were you when you first saw someone hurt or kill an animal?

OVER PLEASE
The Following Questions DO NOT Relate to Hunting or Accidents:
How many times during your childhood did you see someone hurt or kill an animal?
Who did you see hurt or kill an animal? (Circle all that apply)
1. Parent  
2. Brother/sister  
3. Other family member  
4. Friend  
5. Neighbor  
6. Stranger
Did you or your family have a pet while growing up?  
1. Yes  
2. No
Have you hurt or killed animals?  
1. Yes  
2. No
How many times have you hurt or killed animals?
How old were you when you first hurt or killed animals?
How old were you when you hurt or killed animals the last time?
What animals did you hurt or kill?
   Pet animals (what kind)  
   Stray animals (what kind)  
   Farm animals (what kind)
What did you do to hurt or kill the animals? (Circle all that apply)
   1. Drowned  
   2. Hit/beat  
   3. Shot  
   4. Kicked  
   5. Choked  
   6. Burned  
   7. Stabbed  
   8. Had sex with it  
   9. Starved/neglected  
   10. Hit with rocks  
   11. Other
Why did you hurt or kill the animals? (Circle all that apply)
   1. For fun  
   2. Out of anger  
   3. Hate for the animal  
   4. Because you saw someone else do it  
   5. Other reason
Did you hurt or kill the animals alone?  
1. Yes  
2. No
Did you try to cover up what you did to the animals?  
1. Yes  
2. No
Did hurting or killing the animals upset you when it occurred?  
1. Yes  
2. No
Does it upset you today that you hurt or killed animals before?  
1. Yes  
2. No

THANK YOU FOR YOUR PARTICIPATION
Caleb Trentham was born in Sevierville, Tennessee, to the parents of Charles and Monica Trentham. He is the first of two children, a younger sister Mary Irons. He attended Sevier County High School in East Tennessee. After graduating, he joined the United States Marine Corps and became a Forward Observer assigned to the 2D Air Navel Gunfire Liaison Company in Camp Lejeune, North Carolina. Caleb was deployed on two separate seven month tours to Helmand Province, Afghanistan. After receiving an Honorable Discharge from the military, he began using his GI Bill at the University of Tennessee at Chattanooga. He received his Bachelor of Science in Criminal Justice in May 2015 and will complete the Master of Science in Criminal Justice in August 2016.