

EXAMINING THE EFFECT OF CHILDHOOD ANIMAL CRUELTY MOTIVES ON
RECURRENT ADULT VIOLENT CRIMES TOWARD HUMANS

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**Examining the Effect of Childhood Animal Cruelty Motives on
Recurrent Adult Violent Crimes Toward Humans**

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DEDICATION

To my wife

Sharon Overton

Grandfather

Raymond Maurice Burdette

Mother

Brenda Overton

Father

Gary Overton

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ABSTRACT

Few researchers have studied the predictive ability of childhood animal cruelty motives as they are associated with later recurrent violence toward humans. Based on a sample of 180 inmates at one medium- and one maximum-security prison in a Southern state, the present study examines the relationship among several retrospectively identified motives (fun, out of anger, hate for the animal, and imitation) for childhood animal cruelty and the later commission of violent crimes (murder, rape, assault, and robbery) against humans. Almost two-thirds of the inmates reported engaging in childhood animal cruelty for fun, whereas almost one-fourth reported being motivated either out of anger or imitation. Only one-fifth of the respondents reported they had committed acts of animal cruelty because they hated the animal. Regression analyses revealed that recurrent animal cruelty was the only statistically significant variable in the model. Respondents who had committed recurrent childhood animal cruelty were more likely to have had committed recurrent adult violence toward humans. None of the motives for committing childhood animal cruelty had any effect on later violence against humans.

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CHAPTER 1: INTRODUCTION

In 1961, MacDonald became the first researcher to attempt to identify the role childhood animal cruelty played as a possible indicator of later violence against humans. By sampling 48 psychotic patients and 52 non-psychotic patients, he identified three primary characteristics that were consistently found among the most sadistic individuals: enuresis, fire setting, and childhood cruelty toward animals. He subsequently concluded that this triad of behaviors was a strong predictor of homicidal behavior when accompanied with parental brutality and extreme maternal seduction. However, MacDonald noted that the appearance of the triad alone was of little value when predicting future homicidal behavior.

Three years later, Mead noted that childhood animal cruelty could indicate the formation of a spontaneous, assaultive character disorder. She argued that animal cruelty “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). The conclusions offered by Mead gained the attention of the American Psychiatric Association more than 20 years later.

In 1987, the American Psychiatric Association (APA) added animal cruelty as a symptom of childhood conduct disorders to the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., revised). The *DSM-IV* defined conduct disorder 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, 1994, p. 90). To be diagnosed with conduct disorder, at least three of the 15 symptoms of the disorder must be present within an individual during the previous year. In addition,

the APA suggested that many of these same children would show similar symptoms during adulthood, some of which meet the criteria for antisocial personality disorder. In 2001, Ascione argued that animal cruelty could be one of the first symptoms of conduct disorder to appear during childhood.

More recently, research efforts have been underway to examine the relationship between childhood animal cruelty and later violence against humans (Arluke, Levin, Luke, & Ascione, 1999; Gleyzer, Felthous, & Holzer, 2002; Hensley, Tallichet, & Dutkiewicz, 2009; Merz-Perez & Heide, 2004; Merz-Perez, Heide, & Silverman, 2001; Miller & Knutson, 1997; Ressler, Burgess, Hartman, Douglas, & McCormack, 1998; Tallichet & Hensley, 2004; Verlinden, 2000; Wright & Hensley, 2003). However, the results of these studies have been inconsistent in their attempt to find a clear link between childhood animal cruelty and later violence against humans. On the one hand, two of these studies have either shown no relationship between childhood animal cruelty and later violence against humans or have dispelled the time order relationship (Arluke et al., 1999; Miller & Knutson, 1997). On the other hand, several studies have shown an association, as well as a time order relationship, between childhood animal cruelty and later violence toward humans (Gleyzer et al., 2002; Hensley et al. 2009; Merz-Perez & Heide, 2004; Merz-Perez et al., 2001; Ressler et al., 1998; Tallichet & Hensley, 2004; Verlinden, 2000; Wright & Hensley, 2003).

Although it is important to understand the relationship between childhood animal cruelty and later adult human violence, only recently has the focus of this research shifted toward understanding the motivations behind animal abuse (Hensley & Tallichet, 2008; Merz-Perez & Heide, 2004; Merz-Perez et al., 2001). As Arluke and Lockwood (1997)

suggested, developing a model for explaining animal cruelty should involve making animal abuse “intelligible by constructing such behavior as ordered and rational, unpacking the abusers’ reasoning, logic, and decision-making that informs their actions” (p. 187). They further argued that “if some abusers describe their actions as fun and thrilling, then we need to discover what it means, feels, sounds, tastes, or looks like to abuse and kill animals as a fun and thrilling experience” (p. 187). In other words, motives should be paramount to understanding animal abuse. Therefore, the present study replicates Hensley and Tallichet’s (2008) research on animal cruelty motivations. Specifically, it examines several post hoc motivations of inmates who engaged in childhood animal cruelty and the relationship of each of these motivations to the number of violent crimes committed by the sample.

CHAPTER 2: LITERATURE REVIEW

In 1987, Felthous and Kellert conducted a meta-analysis of 15 studies to determine if there was a link between childhood animal cruelty and later violence toward humans. This critical review covered studies from the 1970s and 1980s that had examined violent and nonviolent psychiatric patients (See Felthous & Kellert, 1987, for a complete description of these studies.) Most findings from these studies failed to indicate a relationship between childhood animal cruelty and later violence toward humans. In addition, the data that did support the association was subsequently labeled “soft and of dubious reliability” (Felthous & Kellert, 1987, p. 69). It is important to note that Felthous and Kellert did not analyze single acts of animal cruelty or cases that did not involve “dangerous or injurious” reports (p. 69).

Ten of the 15 studies that were reviewed failed to find a clear link between childhood animal cruelty and later violence against humans. Of these, many lacked a clear definition of the two behaviors being analyzed. Nine of these ten studies also analyzed single acts of violence directed toward humans rather than recurrent violence and more than half of these studies that found no relationship between the two behaviors used the chart method as a means of data collection. However, studies that did find a relationship examined recurrent animal cruelty and human violence rather than just single acts of animal cruelty and violence toward humans. In addition, these studies did not rely on the chart method of data collection; rather, they used face-to-face interviews. Felthous and Kellert (1987) argued that researchers should not rely on clinical records and/or focus solely on a single act of either animal cruelty or interpersonal violence.

Recent Studies that Failed to Find a Relationship or Time Order

There have been two previous studies that have either shown no relationship between childhood animal cruelty and adult violence against humans or have found no time order between the two behaviors (Arluke et al., 1999; Miller & Knutson, 1997). The first study by Miller and Knutson (1997) analyzed crimes committed by 314 male and female inmates in a prisoner classification unit. Groups were subdivided based on the charges each of the inmates had received upon arrest. This was done to obtain a more accurate sample and to eliminate any lesser charges that the offenders may have received because of a plea bargain. The divided groups subsequently consisted of a homicide group, violent offender group, sex offense group, and other offense group. The goal of the study was to examine the relationship between animal cruelty and the offenders' type of charge.

Approximately 66% of the respondents indicated some exposure to animal cruelty, including either witnessing or committing animal cruelty. No relationship was found between exposure to animal cruelty (i.e., either witnessing or committing it) and the inmates' type of charge. Miller and Knutson, however, did find a modest association between exposure to animal cruelty and "the aversive childhood histories of the subjects" (p. 59).

To supplement the data, Miller and Knutson (1997) conducted a follow-up study with 308 undergraduate students to determine if exposure to animal cruelty was distinctive only to the incarcerated sample. Of the undergraduate respondents, 48.4% reported some exposure to animal cruelty. Of these, 57% indicated witnessing animal cruelty, while 20.5% engaged in animal cruelty on one or more occasions. However,

similar to the previous data, only a slight association was found between animal cruelty and the undergraduates' "punitive and acrimonious" childhood histories (p. 59).

Ultimately, the two datasets failed to demonstrate that exposure to animal cruelty was related to later criminal or violent activity. The authors concluded that exposure to animal cruelty, especially in the second study, had little effect on the development of antisocial behavior. Miller and Knutson (1997) did, however, highlight two limitations of their research. First, they detected high base rates of exposure to animal cruelty between both groups (i.e., prisoners and undergraduates). Second, the composite measure of exposure to animal cruelty was positively skewed, possibly making it difficult to produce significant findings.

In 1999, Arluke et al. examined the criminal records of 153 animal abusers and 153 control participants to ascertain if animal abusers graduated from violence against animals to violence against humans. They obtained data from the records of the Massachusetts Society for the Prevention of Cruelty to Animals (MSPCA), an association legally empowered to investigate animal cruelty cases. All of the individuals that comprised the animal abuse group had been prosecuted for animal cruelty. The control participants were matched to the animal abuse group in terms of gender, socioeconomic status, age, and residence.

The researchers found that individuals who abused animals were more likely to commit criminal behavior when compared to the control participants. The animal abuse group was more likely to commit property, drug, public disorder, and interpersonal offenses when compared to the control group. Animal abusers were 3.2 times more likely to have a criminal record and 5.3 times more likely to have a violent criminal

record when compared to the control participants. However, Arluke et al. (1999) also determined that these criminal behaviors were no more likely to precede than follow animal cruelty, dispelling the idea that these individuals eventually graduated to committing acts of violence against humans. Rather, they noted that just 16% of the animal abusers graduated to violent crimes against humans. However, they concluded that if they had examined recurrent animal abuse the graduation hypothesis might have been supported.

Recent Studies that Support the Relationship and Time Order

Several recent studies have found that individuals who committed childhood acts of animal cruelty were more likely to commit adult acts of violence against humans (Gleyzer et al., 2002; Hensley et al., 2009; Merz-Perez & Heide, 2004; Merz-Perez et al., 2001; Ressler et al. 1998; Tallichet & Hensley, 2004; Verlinden, 2000; Wright & Hensley, 2003). These studies have also supported the time order relationship between the two behaviors. In 1998, Ressler et al. conducted a study of 36 male sexual murderers, 29 of which were serial murderers. They examined the childhood characteristics associated with sexual homicide with specific attention devoted to observing any symptoms of the “MacDonald triad” (i.e., enuresis, fire setting, and childhood animal cruelty). Of the 36 men in Ressler et al.’s study, 28 were tested for specific childhood characteristics, including the MacDonald triad. The results indicated that 36% of the individuals committed childhood animal cruelty, 46% committed adolescent animal cruelty, and 36% continued their cruelty toward animals into adulthood. Of the components of the triad, only animal cruelty and fire setting were found to be present. Ressler et al. (1998) concluded that cruelty to animals may not only be a predictor of

violence against humans later in life, but could possibly be a predictor of violence in the most extreme forms.

Verlinden (2000) examined the individual, familial, school, societal, and situational risk factors of 11 perpetrators of school shootings, she found that 45% (or 5 of the 11 shooters) had displayed a history of childhood animal cruelty. For example, Evan Ramsey (Bethel, Alaska) threw rocks at dogs simply for amusement. Eric Harris and Dylan Klebold (Littleton, Colorado) commonly discussed their mutilation of animals with friends. Kipland “Kip” Kinkel (Springfield, Oregon) boasted to peers about beheading cats and blowing up a cow with explosives. Finally, Luke Woodham (Pearl, Mississippi) tortured and killed his dog before murdering his mother and two of his classmates.

In addition, Wright and Hensley (2003) examined the possible relationship between childhood animal cruelty and serial murder. They investigated 354 cases of serial murder and found that 21% had engaged in animal cruelty. They also selected five cases showing these murderers’ graduation from animal cruelty at a young age to interpersonal violence during their adulthood. These children abused animals in order to vent their repressed frustration and aggression. Therefore, abusing animals during their childhood was a precursor for future violence against humans. Wright and Hensley also found that the methods used by five of these serial murderers to kill their animal victims resembled the methods they later used to kill their human ones, a finding supported by Merz-Perez et al. in 2001.

Merz-Perez and Heide (2004) and Merz-Perez et al. (2001) examined the relationship between childhood animal cruelty and later acts of violence against humans

based on interviews with 45 violent and 45 nonviolent offenders in a Florida maximum-security prison. They found that 56% of violent offenders exhibited a history of animal abuse as compared to only 20% of non-violent offenders. They also found that 26% of violent offenders committed animal cruelty toward pets as compared to only 7% of non-violent offenders. The proportion of violent offenders who committed cruelty to wild animals was also greater than that of the nonviolent offenders (29% and 13%, respectively). Additionally, 14% of violent offenders committed cruelty to farm animals as compared to only 2% of non-violent offenders. Finally, the authors uncovered that none of the non-violent offenders reported cruelty toward stray animals; however, 11% of the violent offenders had committed animal cruelty toward stray animals on one or more occasions.

Gleyzer et al. (2002) examined the relationship between recurrent childhood animal cruelty and a diagnosis of antisocial personality disorder (APD). The case histories of 96 men were investigated, 48 with a history of childhood animal cruelty and 48 with no such history. The control group was matched to the study group based on sex, race, and age. They found a significant relationship between childhood animal cruelty, APD, and polysubstance abuse, but no relationship was found between animal cruelty, alcohol abuse, psychotic disorders, or mental retardation. A diagnosis of APD was much more common in the sample of men who had a history of animal abuse compared to those who did not (37.5% and 8%, respectively). Signs of antisocial personality traits were absent in the control group, but were discovered in 16.7% of the animal abuse group.

In 2004, Tallichet and Hensley surveyed 261 male inmates in three prisons in a southern state. The purpose of the study was to determine if inmates who committed

recurrent childhood animal cruelty were more likely to be convicted of recurrent adult acts of violence against humans. Respondents who had more siblings and those who had committed recurrent acts of animal cruelty were more likely to have engaged in recurrent acts of human violence. Five years later, Hensley et al. (2009) replicated this study by surveying 180 inmates in two prisons in another southern state. The authors again found that recurrent acts of childhood animal cruelty were related to the adult commission of recurrent violent crimes.

Motivations of Animal Cruelty and Violence Against Humans

Although it is vital to understand the relationship between childhood animal cruelty and adult violence toward humans, the motives behind these acts may be of critical importance in establishing such a link (Merz-Perez et al., 2001). Kellert and Felthous (1985) were the first to develop an animal cruelty motivation classification scheme. By interviewing 152 criminals (aggressive, moderately aggressive, and non-aggressive) and non-criminals, they found that 25% of the aggressive criminals committed five or more acts of animal cruelty as compared to less than 6% of moderate and non-aggressive criminals and none of the non-criminals. The classification scheme consisted of nine animal cruelty motivations: to satisfy a nonspecific sadism, to enhance one's own aggressiveness, to shock people for amusement, to express aggression through an animal, to control an animal, to retaliate against an animal, to satisfy a prejudice against a species or breed, to retaliate against another person, and to displace hostility from a person to an animal. The authors, however, did not perform any statistical analyses to justify their inclusion of these motivations.

Ascione, Thompson, and Black (1997) examined the causes of animal abuse in a clinical sample of 20 children. Using semi-structured interviews with the children and their parents, they were able to identify several motivations behind the acts of childhood animal cruelty. These included: mood enhancement, peer pressure, sexual gratification, curiosity or exploration, forced abuse, self-injury, vehicle for emotional abuse, imitation, attachment to an animal, animal phobias, rehearsal for interpersonal violence, and identification with the child's abuser.

Based on these prior works, Ascione (2001) developed a childhood and adolescent animal cruelty typology consisting of three categories. The first encompassed exploratory or curious animal abusers by preschool or early elementary aged children who did not possess sufficient training in caring for pets and stray animals and often lacked proper supervision. The second was identified as pathological animal abusers, consisting of older children whose animal abuse was more indicative of psychological disturbances because of their exposure to physical abuse, sexual abuse, and/or domestic violence. The final group consisted of delinquent animal abusers who participated in antisocial behavior and sometimes used alcohol and/or drugs while abusing animals. Of the three typologies, Ascione noted that judicial and clinical interventions were often required for the third group.

Hensley and Tallichet (2005) examined the impact that demographic and situational factors had on childhood and adolescent animal cruelty motivations among an inmate sample. These motivations included: fun, anger, shock, fear of animal, dislike of animal, revenge, control, imitation, sex, and desire to impress others. More than one half of the sample engaged in animal cruelty out of anger while one-third did so for fun.

Those who committed childhood and adolescent animal cruelty alone were more likely to commit the acts out of anger, but were less likely to do so to impress others, to imitate others, or for sex.

In 2008, Hensley and Tallichet examined the effect of childhood and adolescent animal cruelty motivations on inmates' subsequent convictions for interpersonal violent crimes as adults. These respondents were asked if they had ever committed animal cruelty for fun, out of anger, dislike for the animal, and imitation. The inmates were also asked how many times they had committed childhood and adolescent animal abuse and their age when they first started abusing animals. Hensley and Tallichet (2008) found that abusing animals for fun during their youth was related to later recurrent violence against humans.

Because of the insufficient quantitative data regarding the motivations of childhood and adolescent animal cruelty, this study was designed to replicate the Hensley and Tallichet (2008) study, to further the understanding of why people commit animal abuse and assess the impact that these motives have on the later commission of adult violent crimes. However, the current study is different in three important ways. First, the respondents were asked how frequently they had committed adult violent crimes rather than being asked how often they had been convicted of those crimes. Second, a measure for robbery, another index violent crime was included because robbery was previously excluded in the earlier study by Hensley and Tallichet (2008). Finally, the inmate sample is from a different southern state than the one Hensley and Tallichet used in their earlier study of animal cruelty motives.

CHAPTER 3: METHODOLOGY

Participants

In March 2007, all inmates housed in one medium- and one maximum-security southern correctional facility for men were requested to participate in a study of childhood animal cruelty. Of the 1,800 inmates incarcerated in the two prisons, a total of 180 agreed to participate in the study, yielding a response rate of 10%. Although this response rate appears low, most prison studies dealing with sensitive issues attract 25% or fewer respondents (Hensley et al., 2009; Tallichet & Hensley, 2004; Tourangeau, Rips, & Rasinski, 2000). After obtaining approval from the state department of corrections and the university's Institutional Review Board, the principal researcher drove to the facilities and delivered the questionnaires and informed consent forms. The informed consent stated that the questionnaires were confidential. In addition, the state department of corrections agreed not to open any of the surveys prior to them being mailed back to the authors.

Correctional counselors at each prison distributed self-administered questionnaires to each inmate. Inmates were informed that it would take approximately 20 minutes to complete the 26-item questionnaire. Inmates were asked to return their completed questionnaires and signed informed consent forms in a stamped, self-addressed envelope within one month of distribution. No incentives were given for completion of the survey. The researchers contacted the two prisons after the 30-day period to make sure all completed surveys had been mailed.

Table 1 displays the characteristics of the state prison population and the sample. A comparison of the racial composition, type of offense committed, and age distribution

of the respondents and the state prison population revealed no significant differences between the two. Thus, the sample appears to be representative of the state prison population in terms of these variables.

Measures

The primary goal of the present study was to examine the relationship between several post hoc motives identified by respondents who had engaged in adolescent animal cruelty and the number of violent crimes they had committed as adults. Inmates were asked a series of questions regarding their interpersonal violent histories. They included: 1) “Have you ever committed murder or attempted murder?” 2) “Have you ever committed rape or attempted rape?”; 3) “Have you ever committed aggravated or simple assault?”; and 4) “Have you ever committed robbery?” These questions were coded 0 = no and 1 = yes. More importantly, they were also asked how many times they had committed each of these interpersonal crimes. To develop a cumulative score of repeated interpersonal violence, we added the number of times each inmate had committed these crimes. The scores ranged from zero to 16 with an average of 3.46 and a standard deviation of 3.70. The cumulative score for each inmate was then used as the dependent variable.

Inmates were also asked to indicate why they hurt or killed animals by circling all the motivations listed on the survey that applied to their individual situations. These included: for fun, out of anger, hate for the animal, and imitation. Each response for each motivation was coded so that 0 = had not committed animal cruelty for that reason and 1 = had committed animal cruelty for that reason. Finally, inmates were asked how many

times they had hurt or killed animals as adolescents and how old they were when they first committed animal cruelty. These items served as the independent variables.

Data Analysis

In order to achieve the main goal of the study, frequencies and percentages of inmates who committed childhood animal cruelty and their motives for engaging in these acts were conducted. Secondly, zero-order correlations between the independent variables that were either ordinal or interval scaled were assessed. Finally, ordinary least squares regression was calculated to determine the effects these motives of adolescent animal cruelty had in predicting later adult violent crimes.

CHAPTER 4: RESULTS

Of the 103 inmates who had engaged in childhood and adolescent animal cruelty, over 64% reported that they had committed some of these acts for fun while approximately 24% reported being motivated either out of anger or imitation. Approximately 20% reported that they had committed acts of cruelty toward animals because they hated the animal. It must be noted that inmates could select more than one motivation, resulting in a total cumulative percentage considerably higher than 100%.

Table 2 presents the zero-order correlation matrix between the independent variables. Inmates who had committed childhood or adolescent animal cruelty for fun were less likely to commit these acts out of anger or because they hated the animal. Inmates who were motivated to commit animal cruelty out of anger were more likely to also do it because they hated the animal and were more likely to engage in recurrent animal cruelty. Respondents who committed animal cruelty because they hated the animal were more likely to engage in recurrent animal cruelty and were younger when they first committed animal abuse. Also, respondents who first committed an act of animal cruelty at a younger age were more likely to have engaged in multiple acts of animal cruelty. None of the relationships exceeded a value of .52, indicating no multicollinearity.

In order to examine the effects of the independent variables on the dependent variable, multiple regression analysis was performed. According to Table 3, recurrent animal cruelty was the only statistically salient variable in the model. Inmates who had committed recurrent animal cruelty as children or adolescents were more likely to have

had committed recurrent adult violence toward humans. The independent variables accounted for 10% of the total variance in the model.

CHAPTER 5: DISCUSSION

Several recent investigations have explored the relationship between childhood animal cruelty and later adult violence toward humans. Many of these studies have found a clear link between the two acts, as well as the necessary time order to support the relationship (Gleyzer et al., 2002; Hensley et al., 2009; Merz-Perez & Heide, 2004; Merz-Perez et al., 2001; Ressler et al., 1998; Tallichet & Hensley, 2004; Verlinden, 2000; Wright & Hensley, 2003). Only one study has quantitatively examined the effect of childhood animal cruelty motivations on the commission of adult violent crimes (Hensley & Tallichet, 2008). The current study sought to replicate the Hensley and Tallichet (2008) investigation by examining the relationship between several post hoc motives (anger, fun, hatred, and imitation) for childhood animal cruelty and later violent crime commission (murder, rape, assault, and robbery) among male inmates at one medium- and one maximum-security correctional facility. Among those respondents who committed childhood animal cruelty, almost two-thirds did so for fun while approximately one-fourth was motivated out of anger or imitation. Only one-fifth of the sample reported committing animal abuse because they hated the animal they abused.

In 2008, Hensley and Tallichet found that the commission of childhood animal cruelty for fun was the only statistically salient motive for predicting later recurrent violence against humans. In the present study, however, none of the motives for committing childhood animal cruelty were found to predict later recurrent violent crimes toward humans. The only variable that was predictive of such behavior was recurrent childhood animal cruelty. Thus, inmates who engaged in repeated childhood animal cruelty were more likely to engage in recurrent violent crimes as adults. This finding is

consistent with several recent investigations, which have found a link between the two behaviors (Hensley et al., 2009; Merz-Perez & Heide, 2004; Merz-Perez et al., 2001; Tallichet & Hensley, 2004).

The present study has several limitations. First, while the use of a survey permits the analysis of data from a larger sample, this technique does rely heavily on paper and pencil self-reports. By doing so, illiterate inmates may have been excluded from the sample, which may also have potentially compromised the validity of the sample delineation of inmates with a violent or non-violent history (Merz-Perez & Heide, 2004). Similarly, the use of the Uniform Crime Report categories for crimes against humans presumes that inmates have knowledge of the kinds of behaviors included in these legalistic terms. Finally, although other inmate studies dealing with sensitive topics have yielded low response rates, our 10% return rate is quite low for survey-based methodology. These limitations may affect the generalizability of the study to the larger population of inmates in the state and nationwide.

Future studies could avoid some of these survey-related pitfalls by using direct interviews, which could possibly yield much richer data. Studies should also screen respondents' self-reporting behavior against record data or official measures, such as those previously conducted by Merz-Perez and Heide (2004) and Merz-Perez et al. (2001). Moreover, future studies would also contribute to the field if the number of cases were sufficiently large to ascertain if childhood animal cruelty motivations were more strongly related to specific types of violent crimes committed against humans.

Identifying and understanding the motives of animal abuse can prove to be an important factor in implementing prevention and intervention strategies. Beginning

prevention and intervention strategies, such as teaching respect and compassion for animals, when children are young and in school could be the first step in curbing the amount of animal abuse in our society. Additionally, intensive counseling for childhood and adolescent animal cruelty offenders could serve as therapeutic rehabilitation for them, possibly preventing them from becoming recurrent animal abusers or interpersonally violent, or both.

Within the past decade, policy makers, law enforcement officials, and animal welfare activists have collaborated to identify and highlight the potential early warning signs of childhood and adolescent animal cruelty and its possible relationship to later human violence. By identifying early warning signs such as frequency and the complex nature of why animal cruelty occurs, those individuals who are at a higher risk of committing violence against animals and humans could be identified and exposed to early intervention strategies.

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APPENDIX A

TABLE 1**Population and Sample Characteristics**

Characteristic	Prison Population		Sample	
	N	%	n	%
<hr/>				
Race:				
White	9,333	51.9	91	50.6
Other	8,667	48.1	89	49.4
Type of Offense:				
Violent Crime	11,283	62.7	115	63.9
Other Crime	6,717	37.3	65	36.1
Median Age	35 years		33.5 years	

TABLE 2**Zero-Order Correlation Matrix Between Independent Variables (n = 103)**

	X ₁	X ₂	X ₃	X ₄	X ₅
X ₁ For Fun					
X ₂ Out of Anger	-.52*				
X ₃ Hate for Animal	-.48*	.22*			
X ₄ Imitation	-.14	-.06	.11		
X ₅ Times Hurt or Killed Animals	-.13	.29*	.20*	-.04	
X ₆ Age When Hurt or Killed Animals	.08	-.05	-.20*	.06	-.23*

*Denotes statistical significance at the .05 level.

Coding: (X₁) For Fun (0 = No, 1 = Yes); (X₂) Out of Anger (0 = No, 1 = Yes); (X₃) Hate for the Animal (0 = No, 1 = Yes); (X₄) Imitation (0 = No, 1 = Yes); (X₅) Number of Times Hurt or Killed Animals (continuous variable); (X₆) Age When First Hurt or Killed Animals (continuous variable).

TABLE 3**OLS Regression Solutions Predicting Recurrent Violence Against Humans (n = 103)**

	<i>b</i>	<i>S.E.</i>	β
X ₁ For Fun	-.23	1.03	-.03
X ₂ Out of Anger	-.66	1.07	-.07
X ₃ Hate for Animal	.94	1.08	.10
X ₄ Imitation	-.88	.89	-.10
X ₅ Times Hurt or Killed Animals	.27	.12	.24*
X ₆ Age When Hurt or Killed Animals	-.17	.14	-.12
Adj. R^2		.10	
<i>F</i> value		2.24	
Significance		.05	

*Denotes statistical significance at the .05 level.

Coding: (X₁) For Fun (0 = No, 1 = Yes); (X₂) Out of Anger (0 = No, 1 = Yes); (X₃) Hate for the Animal (0 = No, 1 = Yes); (X₄) Imitation (0 = No, 1 = Yes); (X₅) Number of Times Hurt or Killed Animals (continuous variable); (X₆) Age When First Hurt or Killed Animals (continuous variable); (Y₁) Number of Times Committed Adult Violence Against Humans (continuous variable, Mean = 3.46; SD = 3.70).

APPENDIX B

MEMORANDUM

TO: Joshua Overton **IRB # 10-169**
Dr. Christopher Hensley

FROM: Lindsay Pardue, Director of Research Integrity
Dr Bart Weathington, IRB Committee Chair

DATE: December 8, 2010

SUBJECT: IRB Application # 10- 169: Examining Motives of Childhood Animal Abusers

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 # 10-169.

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 us at: instrb@utc.edu.

Best wishes for a successful research project.

VITA

Joshua C. Overton was born in Paducah, Kentucky to the parents of Gary Overton and Brenda Overton. He attended Sullivan South High School in Kingsport, Tennessee. He then received his Bachelor of Science degree in Criminal Justice/Criminology at East Tennessee State University in Johnson City, Tennessee. He currently holds a Master's of Education from the University of Tennessee at Chattanooga and is a teacher at St. Jude Catholic School in Chattanooga, Tennessee. He is now a Master's candidate in Criminal Justice at the University of Tennessee at Chattanooga.