CHILDHOOD ANIMAL CRUELTY MOTIVES AND THEIR RELATIONSHIP TO RECURRENT ADULT INTERPERSONAL CRIMES

By

Joseph B. Ketron

Christopher Hensley Professor of Criminal Justice (Committee Chair) Karen McGuffee Professor of Criminal Justice (Committee Member)

Christina Policastro Assistant Professor of Criminal Justice (Committee Member)

CHILDHOOD ANIMAL CRUELTY MOTIVES AND THEIR RELATIONSHIP TO RECURRENT ADULT INTERPERSONAL CRIMES

By

Joseph B. Ketron

A Thesis Submitted to the Faculty of the University of Tennessee at Chattanooga in Partial Fulfillment of the Requirements of the Degree of Master of Science in Criminal Justice

The University of Tennessee at Chattanooga Chattanooga, Tennessee

December 2017

Copyright © 2017

By Joseph Blake Ketron

All Rights Reserved

ABSTRACT

Although research investigating the link between childhood animal cruelty and adult interpersonal violence dates back to the early 1960s, few scholars have examined the predictive ability of childhood animal cruelty motives and their relationship to later violence toward humans. Based on a sample of 257 male inmates, the present study examines the relationship between four retrospectively identified motives for childhood animal cruelty and later adult interpersonal violence. Almost half of the inmates reported engaging in childhood animal cruelty for fun. Over one-third of the respondents reported committing acts of childhood animal cruelty because of hate for the animal, whereas just over 40% cited imitation as their primary motive for animal abuse. Regression analyses revealed that recurrent childhood animal cruelty was the only statistically significant variable for predicting later adult interpersonal violence.

ACKNOWLEDGEMENTS

I would like to sincerely thank Dr. Chris Hensley, the chair of my thesis, for helping me through the research and editing processes of my thesis. He also guided me through my education at the University of Tennessee at Chattanooga as my undergraduate advisor and influenced me to continue my education in the UTC's Master's Program. Without his guidance, I would not have attended the graduate school at UTC. I would also like to thank Professor Karen McGuffee and Dr. Christina Policastro, members of my thesis committee, who gave me essential advice and suggestions. Lastly, I would like to thank my wife, Kayla Ketron, for being a continual source of motivation.

TABLE OF CONTENTS

ABSTRACT.	
ACKNOWLE	DGEMENTSv
LIST OF TAE	BLESvii
CHAPTER	
I.	INTRODUCTION1
II.	LITERATURE REVIEW7
III.	METHODOLOGY
	Participants19
	Dependent Variable
	Independent Variable
	Control Variables
	Data Analysis
IV.	RESULTS
V.	DISCUSSION
REFERENCE	S
APPENDIX	
VITA	

LIST OF TABLES

1	Population and Sample Characteristics	21
2	Descriptive Statistics – Independent and Dependent Variables ($n = 257$)	.25
3	OLS Regression Summary ($n = 123$)	.26

CHAPTER I INTRODUCTION

On the morning of October 1st 1997, Luke Woodham walked into the halls of Pearl High School in small town Pearl, Mississippi and opened fire with a high-powered hunting rifle that he had concealed under his coat. Woodham had already stabbed his mother, Mary, to death earlier that day, and by the time he darkened the halls of Pearl High School he was bent on continuing his murderous rampage. Woodham's target was a young girl, Christy Menefee, with whom he had a brief dating relationship. Woodham found Menefee in the commons area, surrounded by her friends. Woodham opened fire, claiming the lives of Menefee and another girl, while also injuring seven more individuals. In the aftermath of this event, authorities struggled to piece together what had driven this young man to commit such an act. Disturbing details began to surface through an examination of Woodham's own personal writings. He had been involved with other local teenagers who had formed a type of demonic cult they dubbed "Kroth." The group fed each other's anger and hate as they railed against "the Christian God" and the society that failed to show them love. Also detailed in documents released in court proceedings was the torturing and killing of Woodham's dog, Sparkle. Woodham recounted how he and another boy had beaten the animal before setting it on fire and throwing it into a nearby pond. Woodham wrote, "I'll never forget the sound of her breaking under my might. I hit her so hard I knocked the fur off her neck...it was true beauty" (Pressley, 1997, p. A03).

As seen in the case of Luke Woodham, major criminal events are sometimes preceded by instances of violent speech or actions. Many scholars have speculated as to the types of motivating behavior that could be precursory to the commission of such violent crime. For example, MacDonald (1961) brought childhood animal cruelty to the forefront of studies when he named it as part of a triad of juvenile behaviors (i.e., fire setting, enuresis, and animal cruelty), possibly indicative of future adult offending, in particular, homicide. In 1964, Mead also cited childhood animal cruelty as a potential diagnostic sign of character disorder while contending that if detected early enough, the behavior could be treated, possibly preventing adult offending. These early scholars promoted further research into the relationship between childhood cruelty toward animals and future criminal behaviors.

Kellert and Felthous' (1985) study was one of the first to utilize data to empirically test the relationship between childhood animal cruelty and aggressive behavior. Their findings suggested a strong correlation between aggression displayed by adult criminals and their history of childhood cruelty toward animals. They appealed to other researchers, clinicians, and leaders, arguing that their data should serve as an alert as to the importance of childhood animal cruelty as a possible precursor to future antisocial and aggressive behavior.

The American Psychiatric Association (1987) took note and added animal cruelty as one of 15 symptoms displayed by individuals suffering from childhood conduct disorder. To be diagnosed with childhood conduct disorder under the guidelines of the *Diagnostic and Statistical Manual of Mental Disorders 5* (DSM), a child must display at least three of the following behaviors within the past 12 months and at least one of the following behaviors within the last six months: 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 the 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 before age 13 years (American Psychiatric Association, 2013, pp. 469-470).

As noted above, animal cruelty is a behavior associated with conduct disorder. Additionally, as previously discussed, it has been linked to adult interpersonal violence. To further test this link, Felthous and Kellert (1987) conducted a meta-analysis of 15 prior studies on childhood animal cruelty and later violence toward humans that spanned from the 1960s through the 1980s. Of the 15 studies reviewed, 10 failed to show a clear link between childhood animal cruelty and later violence against humans. They cited the lack of clear definitions of animal cruelty and personal aggression, as well as the various methods and thoroughness of data collection as possible causes for inconclusive results. They also noted that several of the studies that found no link had measured single acts of violence rather than recurrent ones (Felthous & Kellert, 1987).

Ten years later, Miller and Knutson (1997) attempted to establish a link between childhood animal cruelty and adult violent offending by analyzing a sample of incarcerated male and female prisoners. However, no clear correlation could be found between the type of offense committed and previous exposure to animal cruelty. Miller and Knutson (1997) conducted a follow-up study using undergraduate students as the sample population, but again no link was discovered. Arluke, Levin, Luke, and Ascione (1999) sought to determine if individuals who

3

abused animals during adolescence graduated to violence against people during adulthood. Their findings revealed that those who abused animals as children were more likely to commit criminal behaviors; however, there was no time order established. Walters (2014), on the other hand, found that although childhood animal cruelty was a strong predictor of violent offending, it also was related to non-violent offending.

Unlike Miller and Knutson (1997), Arluke et al. (1999), and Walters (2014), several studies support the relationship between childhood animal cruelty and adult criminal behavior in both the link and time order in which the events take place (Arluke & Madfis, 2013; Hensley, Tallichet, & Dutkiewicz, 2009; Merz-Perez, Heide, & Silverman, 2001; Merz-Perez & Heide, 2004; Tallichet & Hensley, 2004; Verlinden, 2000; Wright & Hensley, 2003). Some of the contemporary research has been directed at the connection between childhood animal cruelty and multiple victim homicides. Verlinden (2000) examined nine instances of multiple victim homicides involving American high school students while identifying common risk factors observed in each case. The researchers found that in multiple occurrences studied an element of animal cruelty was displayed by the offender prior to the interpersonal violence. Arluke and Madfis (2013) also argued that childhood animal abuse was a clear warning sign for future violence against humans, specifically in school shootings. Wright and Hensley (2003) researched the link between childhood animal cruelty and instances of serial murder, finding evidence for the link through five case studies that illustrated a gradual escalation of violence from animal to human victims.

To further explore the relationship between childhood animal cruelty and adult violence, Merz-Perez et al. (2001) and Merz-Perez and Heide (2004) found that violent offenders were more likely to have committed acts of childhood animal cruelty than nonviolent offenders.

4

Similarly, Tallichet and Hensley (2004) surveyed inmates and found that those who had committed multiple acts of recurrent childhood animal cruelty were more likely to have been convicted of recurrent adult violent crime. Hensley et al. (2009) tested this relationship using survey data gathered from a different sample of male inmates, finding that repeated acts of childhood animal cruelty was the lone significant predictor for committing recurrent adult interpersonal violence.

As noted, although several studies have examined the link, little research has been conducted to establish what motivates children to abuse animals and how this link predicts interpersonal violence. Ascione, Thompson, and Black (1997) found that curiosity and exploration were likely motivating factors of childhood animal cruelty, citing that younger children had not yet internalized society's values regarding the appropriate treatment of animals. These findings explain a portion of why children may commit acts of animal cruelty, but do not explain the full spectrum of motivating factors. Further, it may not explain why some children go on to hurt animals. To fully understand why childhood animal cruelty may serve as a precursor to adult criminality, the underlying motivations for committing acts of animal cruelty must be explored. Illustrating this point, Merz-Perz et al. (2001) contended that there were four factors that were critical to establishing the link between childhood animal cruelty and later aggression toward humans: "the type of cruelty committed, the type of animal targeted, the motivation for the cruelty, and the perpetrator's response to the cruelty committed" (p. 571).

The works of Hensley and Tallichet (2008) and Overton, Hensley, and Tallichet (2012) laid the groundwork for the research into specific motives of childhood animal cruelty as a predictor of adult recurrent violent crimes toward humans. The goal of these studies was to address how individual motivations for committing childhood animal cruelty predicted adult

offending. Hensley and Tallichet (2008), using a sample of male inmates, found that those who committed animal cruelty for fun were more likely to commit recurrent violence against humans. Overton et al. (2012) again tested this association using a different sample of male inmates. Upon analysis of the data, only recurrent acts of childhood animal cruelty were found to be statistically significant in relation to future adult offending; however, no motives were found to be predictive of such behavior.

As these studies suggest, it is imperative to understand the motivations that drive acts of childhood animal cruelty to fully understand how they predict recurrent adult interpersonal violence. Therefore, this research seeks to replicate the Hensley and Tallichet (2008) and Overton et al.'s (2012) studies addressed above. Using a different dataset of male inmates from a different Southern state, the current study examines which, if any, retrospectively identified motives (i.e., fun, anger, hate, and imitation) predict recurrent adult interpersonal violence.

CHAPTER II LITERATURE REVIEW

Scholarly interest in the link between childhood animal cruelty and future adult interpersonal violence has been documented for over 50 years, with research yielding inconsistent results. Early studies bore conflicting results for support of the link between childhood animal cruelty and adult offending (see Felthous & Kellert, 1987; Kellert & Felthous, 1985). One study found that no link exists between childhood animal cruelty and adult violent offending (Miller & Knutson, 1997), another found no established time order between the two (Arluke et al., 1999), and another showed a link with both violent and non-violent crimes (Walters, 2014). Three studies have shown a relationship between childhood animal cruelty and the commission of multiple victim homicides (Arluke & Madfis, 2013; Verlinden, 2000; Wright & Hensley, 2003), while others have supported a relationship between the link and its time order (Hensley et al., 2009; Merz-Perez et al., 2001; Merz-Perez & Heide, 2004; Tallichet & Hensley, 2004). Since research findings have not been definitive, the possible link between childhood animal cruelty and adult violent offending needs to continue. Although the link between childhood animal cruelty and adult violent offending has proven to be important, other factors must be explored to adequately understand the complex nature of animal cruelty. Thus, research into how motivating factors of childhood animal cruelty play in understanding adult violence needs further exploration (Ascione et al., 1997; Hensley & Tallichet, 2008; Kellert & Felthous, 1985; Overton et al., 2012).

Early research in childhood psychology led to MacDonald (1961) developing a triad of behaviors that he observed to be indicative of future adult violent behavior. He argued that a child displaying the behaviors of fire setting, bed-wetting, and animal cruelty were more inclined to commit acts of violence in adulthood. MacDonald (1963) revisited the idea of the predictive power of the triad as he compared 48 psychotic patients to 52 non-psychotic patients whom had threatened to kill someone. He found no support for the predictive power of his triad of childhood behaviors; however, later researchers would use his ideas as a basis for their studies. In an effort to explore the ideas laid forth by MacDonald (1961, 1963), Kellert and Felthous (1985) utilized data compiled through personal interviews with 152 male criminals and noncriminals to examine the relationship between childhood cruelty toward animals and aggressive behavior in adulthood.

The researchers designed an interview session that included approximately 440 closedand open-ended questions intended to glean information about childhood behavior and relationships with people and animals, adult behavior patterns, and attitudes toward animals and human aggression. The 152 subjects were broken into three categories: aggressive criminals, non-aggressive criminals, and non-criminals. It is important to note that the researchers determined aggressiveness in the criminal populations by asking prison counselors to give each criminal subject a rating of aggressiveness on a 1-10 scale with 10 being the most aggressive. This rating was assigned based off of observations made by the counselors of the inmates' behavior subsequent to their arrival at the prison and not tied to the offense to which they were convicted. Of the subjects interviewed, 60% reported at least one or more instances of childhood animal cruelty as defined by the prescribed indicators. The researchers noted that most of the acts reported were viewed as minor cruelties toward animals, such as tearing the wings off of insects. Of particular interest, they found statistical support for aggressive criminals having displayed more childhood animal cruelty behavior than non-aggressive criminals and non-criminals (Kellert & Felthous, 1985).

Continuing their research into the relationship between childhood animal cruelty and adult violent behavior, Felthous and Kellert (1987) reviewed previous studies regarding the association between cruelty to animals and personal violence. The researchers conducted a meta-analysis of 15 studies in an attempt to determine if a link between childhood animal cruelty and adult violence toward humans existed. The scope of the studies spanned almost two decades, from the 1960s through the 1980s, and included research that examined both violent and nonviolent psychiatric patients. Of the 15 studies reviewed, ten failed to find a clear association between childhood cruelty to animals and later violence against people. As noted by Felthous and Kellert (1987), the definition of the behaviors studied was of particular importance. They stated that the characterization of animal cruelty could be expanded to the point where it was considered essentially normal. The vagueness of the definition of cruelty allowed for behaviors that may not particularly be indicative of abnormal aggressive behavior, i.e. killing flies or disciplining a pet dog, to be included in the analysis. Issues with clearly defining cruel behavior were prevalent in many studies that did not find an association between the two behaviors.

Another factor that Felthous and Kellert (1987) cited as contributing to the contradictory findings among many of the studies analyzed was the procedures used to collect the data in each research study. The researchers pointed out that of the studies that found no association between childhood animal cruelty and later violent behavior, over half utilized the chart review method for data collection as opposed to directly interviewing subjects. They argued that the

9

information recorded by clinicians and reviewed by researchers via the chart review method may be equally as biased as information obtained through interviews by researchers. This is incongruous with the idea that data collected for strictly clinical purposes has not been tainted by an interview process designed by researchers. They further discussed possible sources of discrepancies in the results of the studies they analyzed by pointing out that in the studies that used the interview method to collect data, the thoroughness of the interviews could be overlooked. The researchers postulated that a thorough, multi-question interview that explores numerous major life areas was more likely to "elicit acts of cruelty in an individual's past than a schedule with just a few questions on animal cruelty" (Felthous & Kellert, 1987, p. 716).

A final issue with the studies reviewed arose from the number of occurrences of violence. Felthous and Kellert (1987) hypothesized that recurrent acts of animal cruelty are associated with serious recurrent adult interpersonal violent behavior. The researchers asserted that a singular violent action is not sufficient enough to constitute recurrent violence; however, typologies of violence may lead to a distorted measurement of recurrent aggression. It is vital to note that studies that found a relationship between childhood animal cruelty and adult violent offending examined recurrent acts of animal cruelty and interpersonal violence as opposed to single, isolated acts of the same nature. As a result, they proclaimed that the identification of individuals as abnormally violent based merely on one act serves no purpose. The pair emphasized the importance of recurrence in both acts of animal cruelty and personal aggression (Felthous & Kellert, 1987).

After a decade, Miller and Knutson (1997) explored the relationship between childhood animal cruelty and adult violence by analyzing the crimes committed by 314 male and female inmates at the Iowa Medical and Classification Center. The researchers sought to establish if there was a link between the offense type and a history of childhood animal cruelty. The inmates, which were 84% male, were divided into the following four groups based off of charges at the time of arrest: a homicide group, a violent offender group, a sex offense group, and another offense group. They used the most serious felony charge filed at the time of arrest to separate the inmates into categories, citing that plea bargaining may contribute to actual convictions not accurately reflecting true criminal behavior. Through a self-report survey, 66% of inmates indicated that they had observed or committed some form of animal cruelty. They found that their data failed to support a relationship between exposure to animal cruelty and the type of charge for which an inmate was arrested. The researchers concluded that a parallel study with a general population sample would be needed before the findings of their inmate study could be substantiated (Miller & Knutson, 1997).

As a follow-up to this study, Miller and Knutson (1997) used a sample group of 308 undergraduate students to explore the prevalence of animal cruelty in a non-incarcerated sample. The undergraduate students reported exposure to animal cruelty at a lower rate of 48.4% when compared to the inmate rate of 66%. Miller and Knutson (1997) found no statistical association between the two variables. They concluded that due to the failure of the two studies to definitively present a relationship between childhood animal cruelty and adult criminal or violent activity, animal cruelty had a limited effect on the development of adult antisocial behavior. The researchers did, however, note that due to the use of a self-report survey methodology in for both studies, the definition of what was cruelty to animals may have been skewed because, "subjects could apply differing criteria for classifying animal-related acts as 'cruel', and it is possible that the personal classification schema would determine individual responses to the event as well as the sequelae of the events" (Miller & Knutson, 1997, p. 80). Arluke et al. (1999) again tested the relationship between childhood animal cruelty and adult interpersonal violence. The researchers examined the criminal records of 153 animal abusers and 153 control participants. Data for the research were derived from records collected by the Massachusetts Society for the Prevention of Cruelty to Animals. Each of the 153 animal abusers had been prosecuted for animal cruelty crimes and matched the participants who abused animals to a comparison group who were similar in terms of key demographic characteristics. They found that a relationship did exist between animal abuse and violence against humans; however, there was no time order established in reference to the link.

In their research, Arluke et al. (1999) cited the graduation hypothesis theory that animal abusers will work up to violence against humans as the basis of their study. Their findings supported the idea that individuals who engage in acts of animal cruelty were more likely to participate in other forms of criminal activity when compared to the control group (i.e., property, drug, public disorder, and interpersonal crimes). This revealed that animal abuse was not only indicative of an association with future violence, but with criminal activity in general. Through analysis of the data collected, the research team found that 16% of animal abusers went on to perpetrate violent crimes against humans. They found that the criminal behaviors observed in the abusers were no more likely to precede than follow acts of animal cruelty, which disproved the idea laid forth by the graduation hypothesis; however, they pointed to the need for future studies to examine recurrent animal abuse to further test the graduation hypothesis (Arluke et al., 1999).

One such study was Walters' (2014) testing of the direct, indirect, and moderated effects of childhood animal cruelty on future aggressive and non-aggressive offending. His sample included 1,354 participants whom originally were part of the Pathways to Desistance study.

Both aggressive and non-aggressive offending were measured at set time intervals dubbed "waves." These 10 waves were then regressed onto a dichotomous measure of prior participation in animal cruelty and control variables of age, race, sex, and early onset behavior problems evaluated as the baseline reading. By using longitudinal data, he was able to adequately test both correlation and direction in terms of the causal relationship hypothesized between childhood animal cruelty and adult violence toward humans. By introducing behavioral and demographic variables, Walters (2014) was able to control for factors that may lead to alternative hypotheses. He concluded that his study showed a relationship between childhood animal cruelty and both aggressive and non-aggressive offending.

As previously noted, extreme acts of interpersonal violence, such as the Pearl High School killings, leave society seeking answers to how such an event could transpire. Three studies have sought to test the idea that childhood animal cruelty is a precursor to individuals committing multiple victim homicides. Verlinden (2000) used 11 school shooters and examined the individual, familial, school, societal, and situational risk factors of each individual. Cases studied included the perpetrators of the Columbine shooting, Eric Harris and Dylan Klebold, whom had boasted about mutilating animals multiple times. She found that of the 11 shooters studied, five had a history of childhood animal cruelty. Of note, however, was that she failed to adequately examine the nature and severity of the animal abuse in the 11 cases studied, which could lead to any level of perceived abuse being viewed as a potential precursor to multiple victim homicide. Though this study sought to primarily explore risk factors associated with school shootings, it highlighted the link between childhood animal cruelty and future violence.

Arluke and Madfis (2013) also examined childhood animal cruelty as a predictor of multiple victim homicides. They examined data on 23 perpetrators of mass school killings from

13

1988 to 2012. They recorded both if animal abuse occurred before the homicides were committed and details of the abuse when they were available. Ten of 23 (43%) school shooters were found to have engaged in animal cruelty prior to killing humans. The researchers also found that the manner in which the school shooters committed the cruelty against animals was consistently up-close and personal and usually carried out against dogs or cats.

Wright and Hensley (2003) analyzed 354 documented cases of serial murder and found that approximately 21% of the killers had participated in some form of animal cruelty. They were also able to demonstrate a gradual evolution from childhood animal cruelty to adult interpersonal violence through five cases of serial murder. The researchers found that in each of these cases the murderer progressed from childhood animal cruelty to adult serial murder. Additionally, their method of execution for their human victims mirrored the method they used for their animal victims, which was also supported by Merz-Perez and colleagues (Merz-Perez et al., 2001; Merz-Perez & Heide, 2004). Merz-Perez & Heide (2004) interviewed 45 violent and 45 non-violent offenders incarcerated in a Florida maximum security prison in order to examine the relationship between childhood animal cruelty and adult violence against humans. Their findings showed support for the relationship, revealing that 56% of violent offenders had a history of animal cruelty as compared to only 20% of nonviolent offenders.

Tallichet and Hensley (2004), using a sample of 261 male inmates from three Southern prisons, sought to determine if inmates who had been convicted of recurrent violent acts toward humans also had a history of recurrent acts of animal abuse. Demographic characteristics including race, education, residence, parents' marital status, and number of siblings were also analyzed to determine if there was any statistically significant relationships. They found that inmates who had reported having more siblings and those who had reported committing recurrent acts of childhood animal cruelty were more likely to have been convicted of recurrent interpersonal violent crimes. In 2009, Hensley et al. again examined the relationship between these demographic factors, recurrent acts of childhood animal cruelty, and adult violence against humans among a sample of 180 male inmates in a different Southern state. Once again, the researchers found a relationship between recurrent childhood animal cruelty and recurrent acts of adult interpersonal violence.

As can be seen, many studies have examined the link between childhood animal cruelty and adult interpersonal violence; however, few studies have brought into question the motivations individuals use to commit acts of childhood animal cruelty and their relationship to adult interpersonal violence. Kellert and Felthous (1985) were the first to explore the motives behind childhood animal cruelty. By analyzing their data, a classification for the motivations of animal cruelty was developed. They identified nine motivations: to control an animal, to retaliate against an animal, to satisfy a prejudice against a species or breed, to express aggression through an animal, to enhance one's own aggressiveness, to shock people for amusement, to retaliate against another person, displacement of hostility from a person to animal, and nonspecific sadism (p. 1127). The study concluded that aggression in adult offenders may be strongly correlated with childhood animal cruelty, and that the nine identified motivations indicate "the complex multidimensional character of this behavior" (Kellert & Felthous, 1985, p. 1127).

Ascione et al. (1997) interviewed 20 children and their parents in order to examine the root causes of animal abuse. The interviews exposed multiple motivations for the commission of animal cruelty acts such as mood enhancement, peer pressure, sexual gratification, curiosity or exploration, vehicle for emotional abuse, self-injury, imitation, forced abuse, attachment to an

animal, rehearsal for interpersonal violence, animal phobias, and identification with the child's abuser. Ascione (2001) continued to explore childhood animal cruelty by developing a three category typology of adolescent animal cruelty. The first category consisted of exploratory or curious animal abusers by preschool or early elementary aged children whom lacked the experience to care for pets and stray animals. These children were found to also lack proper supervision by an adult caretaker. The second category, pathological animal abusers, was comprised of older children whose animal abuse possibly stemmed from psychological damage due to exposure to physical abuse, sexual abuse, or domestic violence. The third category consisted of delinquent animal abusers. It was marked by individuals who sometimes engaged in drug and/or alcohol usage, as well as antisocial behavior while committing acts of animal cruelty. Delinquent animal abusers often required judicial and clinical intervention (Ascione, 2001).

Hensley and Tallichet (2005) took note of the importance of understanding the motivating factors behind animal cruelty. Using a sample of 261 male inmates in a Southern state, their study explored how demographic attributes and situational factors impacted childhood animal cruelty, specifically the motivations. A list of animal cruelty motivations was compiled which included: for fun, shock, fear of animal, anger, dislike of animal, control, revenge, sex, imitation, and desire to impress others. The survey respondents were asked to report which motivation best described their reason for the commission of cruel acts toward animals. Of the 261 inmates surveyed, 112 indicated they had committed childhood animal cruelty. Almost half of respondents indicated that they had done it for fun. Hensley and Tallichet (2005) noted that individuals who engaged in recurrent childhood animal cruelty were more likely to want to

control the animal than those who engaged in fewer acts. They cited the emotional response triggered by the power and control over the animal as the source for the recurrent behavior.

Using the same data set, Hensley and Tallichet (2008) examined the effects that motivations had on subsequent convictions of adult interpersonal violence. They reduced the motivations for animal cruelty down to four: fun, anger, dislike for the animal, and imitation. Respondents were also asked to report at what age they began abusing animals and the frequency in which they abused animals in their childhood years. They found that fun was the only motivating factor predictive of later adult interpersonal violence. In other words, those respondents who were motivated by fun to commit childhood animal cruelty were more likely to have committed recurrent adult human violence.

In a replication of the previous Hensley and Tallichet (2005) study, Hensley, Tallichet, and Dutkiewicz (2011) sought to further explore what impact demographic and situational factors had on motivations for animal cruelty. They utilized survey data gathered from 180 male inmates in a different Southern state. One hundred and three inmates reported committing acts of animal cruelty. Of those, 64.1% indicated that they did so out of fun, whereas 24.3% indicated they committed acts of animal cruelty out of anger. Hensley et al. (2011) determined that respondents who indicated they committed acts of animal cruelty out of anger were less likely to be upset by their actions or cover up their behavior; however, they were more likely to engage in recurrent childhood animal cruelty. They also found that perpetrators who committed acts of animal cruelty to have committed these acts by themselves and were more likely to live in urban areas. Those who had sexual motivations behind their acts of childhood animal cruelty were found to be more likely to have covered up their behavior and to have repeatedly engaged in it (Hensley et al., 2011).

17

Using the same dataset of Hensley et al. (2011), Overton et al. (2012) replicated the work by Hensley and Tallichet (2008) to determine what, if any, childhood animal cruelty motivations predicted adult interpersonal violence. The researchers found that no motivations for committing childhood animal cruelty were predictive of later recurrent violent crimes toward humans. Moreover, the findings indicated that the only variable to be predictive of recurrent adult interpersonal violence was recurrent childhood animal cruelty. Thus, respondents who engaged in recurrent childhood animal cruelty were more likely to engage in recurrent adult interpersonal violence.

The current study will replicate research by Hensley and Tallichet (2008) and Overton et al. (2012) in an attempt to further understand childhood animal cruelty motivations and their predictive ability to explain recurrent adult interpersonal violence. The current study uses a different dataset from a different Southern state than the previous studies by Hensley and colleagues. Based upon their research, it is hypothesized that none of the motivations will have a significant relationship with recurrent adult interpersonal violence. Additionally, it is hypothesized that the number of times the respondent hurt or killed animals and the age at which they first hurt or killed animals will also have a significant relationship with later adult recurrent interpersonal violence.

18

CHAPTER III METHODOLOGY

The primary goal of the present study is to reexamine the impact that motivations for committing childhood animal cruelty have on the later commission of adult violent crimes first explored by Hensley and Tallichet (2008) and Overton et al. (2012). 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 animal(s) (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). Respondents who reported killing animals while hunting were not considered animal abusers as this is socially condoned behavior. Additionally, respondents were allowed to indicate the method of harm, including a category (i.e., other) which allowed the researchers to exclude other socially accepted behaviors such as accidents.

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 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 26item questionnaire and were asked to return their completed questionnaires in a stamped, selfaddressed 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; Tourangeau, Rips, & Rasinski, 2000).

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 overrepresented 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. 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 a mean of 3.57. The cumulative score for each inmate was then used as the dependent variable.

	Prison Population ¹		Sample	
Characteristic	Ν	%	n	%
Race:				
White	1,212	54.7	146	56.8
Other	1,003	45.3	111	43.2
Type of Offense:*				
Violent Crime	1,167	52.7	175	68.1
Other Crime	1,048	47.3	82	31.9
Median Age	38 years		38 years	

Table 1 Population and Sample Characteristics

¹ Prison 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 to indicate why they hurt or killed animals (other than for hunting) by circling all the motivations listed on the survey that applied to their individual situations. These included for fun, out of anger, dislike for the animal, and imitation. The response for each motivation was coded 0 (had not committed animal cruelty for that reason) and 1 (had committed animal cruelty for that reason). Respondents were asked how many times they had hurt or killed animals during their childhood. The scores ranged from 1 to 20 with a mean of 5.86 acts. Respondents were also asked how old they were the first time they hurt or killed an animal. The scores ranged from 4 to 34 with an average age of 11.24 years.

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 independent and dependent variables. Next, we will examine the relationships between the independent variables and the outcome measure, using independent t-tests and correlations. 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 errors are normally distributed based upon the independent variables. OLS uses the maximum likelihood estimator assuming that the errors have finite variances and are normally distributed.

CHAPTER IV RESULTS

Of the 257 respondents, 124 inmates had engaged in childhood animal cruelty. Table 2 presents the descriptive statistics for the independent and dependent variables. Almost half of the respondents engaged in childhood animal cruelty for fun while over one-third committed it out of anger. Approximately 20% did so out of hate for the animal, and slightly more than 40% committed animal cruelty due to imitation. Of those who committed acts of childhood animal cruelty, respondents did so an average of approximately six times. The average age of the respondents was 11 years old when they first did it. 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 motives and their relationship with the dependent variable. No significant differences were found between the motives, out of anger and hate for the animal, and the outcome measure. There was a significant difference between for fun and the outcome measure; t (122) = -3.8, p < .01. Respondents who committed childhood animal cruelty for fun were less likely to go on to commit adult interpersonal violence. A significant difference also emerged between imitation and the outcome measure; t (122) = -2.16, p < .01. The findings also revealed that inmates who committed childhood animal cruelty because of imitation were less likely to go on to commit adult interpersonal violence. 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. Finally, the age at which respondents first hurt or killed animals and their adult interpersonal violence

history was negatively correlated (r = -.25, p < .01). Therefore, the earlier the age of the first occurrence of childhood animal cruelty the higher the likelihood of the commission of adult interpersonal violence.

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 motives were found to be predictive of later violence against humans. Additionally, the age at which respondents first hurt or killed animals was not significantly related to adult interpersonal violence. The independent variables accounted for 27% of the total variance in the model.

For Fun:			
Yes	58 (46.8%)		
No	66 (53.2%)		
Out of Anger:			
Yes	48 (38.7%)		
No	76 (61.3%)		
Hate for Animal:			
Yes	27 (21.8%)		
No	97 (78.2%)		
Imitation:			
Yes	51 (41.1%)		
No	73 (58.9%)		
Times Committed Animal Cruelty:	x = 5.86	S.D. = 4.72	Missing = 133
Age First Hurt or Killed Animals:	x = 11.24	S.D. = 5.98	Missing = 133
Interpersonal Violence:	x = 3.57	S.D. = 4.84	Missing = 0

Table 2 Descriptive Statistics – Independent and Dependent Variables (n = 257)

]	Recurre Interper Violence	sonal
Variable	b	<i>S.E</i> .	β
For Fun	1.28	1.07	.11
Out of Anger	1.34	.99	.11
Hate for Animal	1.23	1.19	.09
Imitation	.64	.96	.06
Recurrent Childhood Animal Cruelty	.52	.10	.42*
Age First Hurt or Killed Animals	06	.08	06
Adjusted R^2		.27	
<i>F</i> value		8.66	
Significance		.00	

Table 3 OLS Regression Summary (n = 123)

* Denotes statistical significance at the .05 level.

Coding of Independent Variables: For Fun (0 = No, 1 = Yes); Out of Anger (0 = No, 1 = Yes); Hate for Animal (0 = No; 1 = Yes); Imitation: (0 = No, 1 = Yes); How Many Times Have You Hurt or Killed Animals Other Than for Hunting? (continuous); Age First Hurt or Killed Animals (continuous)

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

CHAPTER V DISCUSSION

The relationship between childhood animal cruelty and the commission of interpersonal violence in adulthood has been the topic of many recent studies. Several of these studies have noted a link between childhood animal cruelty and later interpersonal violence (Arluke & Madfis, 2013; Hensley et al., 2009; Kellert & Felthous, 1985; Merz-Perez et al., 2001; Merz-Perez & Heide, 2004; Tallichet & Hensley, 2004; Verlinden, 2000; Wright & Hensley, 2003). Though the link has intrigued scholars, it raised questions as to what other factors may be connected with childhood animal cruelty and later violence against humans. Hensley and Tallichet (2008) were the first to quantitatively examine the effect underlying motivations for childhood animal cruelty had on the later commission of adult interpersonal violence. They found that committing childhood acts of animal cruelty for fun was the lone significant motive that predicted later adult interpersonal violence. This study was replicated by Overton et al. (2010) to test the previous investigation's findings by again examining the relationship between post hoc motives for childhood animal cruelty and later commission of adult interpersonal violence. They found that although most respondents reported committing acts of childhood animal cruelty for fun, recurrence of childhood animal cruelty was the only variable that was predictive of later violent crimes toward humans.

As such, the current study sought to replicate the study conducted by Overton et al. (2010) using the same post hoc motives for childhood animal cruelty but with a different dataset from a different Southern state. Of the respondents who reported committing acts of childhood animal cruelty, almost half engaged in childhood animal cruelty for fun and over one-third committed it out of anger. Additionally, the findings of the current study reflected those of Overton et al. (2010) in that none of the motives for committing childhood animal cruelty were found to predict later recurrent violent crimes toward humans. Again, the only variable found to be predictive of later adult interpersonal violence was recurrent childhood animal cruelty. This echoes the findings of numerous prior studies which have found a link between recurrent acts of childhood animal cruelty and later adult interpersonal violence (Hensley et al., 2009; Merz-Perez et al., 2001; Merz-Perez & Heide, 2004; Overton et al., 2010; Tallichet & Hensley, 2004). As indicated by Felthous and Kellert (1987) that the recurrency of childhood animal cruelty is an indicator of future violence against humans. Perhaps these respondents, over a period of time, had become desensitized to committing violence, in particular, animal cruelty.

The current study yielded data suggestive of a link between recurrent acts of animal cruelty and adult interpersonal violence; however, the investigation had its limitations. First, as with any study that relies on the survey method of data collection, pencil and paper self-reports are often used. This method could prevent illiterate inmates from participation, thus possibly compromising the validity of the sample delineation of inmates with a violent or nonviolent history (Merz-Perez & Heide, 2004). Second, the use of the UCR (Uniform Crime Reports) program's categories for crimes against humans was used within the questionnaires to describe the various types of interpersonal crimes. By doing so, researchers assumed that incarcerated inmates understood the kinds of behaviors defined by the legalistic terms used by the UCR. Futhermore, the current study had a response rate for inmate participation of 11.1% which is considered relatively low given that the paper and pencil method was utilized for data collection. This low response rate could be attributed to the illiteracy issues previously discussed or the

sensitive nature of the topic being examined. It is possible that the respondents did not want to divulge previous deviant and/or criminal acts; thus, they opted not to answer the questions outlined in the survey. Finally, issues with respondents recalling acts that happened years in the past could lead to a skewing of the accuracy of their reporting of the true motivations behind the acts.

There are multiple ways future studies could improve on the shortcomings of the current study. Instead of using a self-report survey method for data collection, utilizing direct interviews could potentially yield richer data and insight. Furthermore, screening the self-reporting behavior of respondents against record data or official measures has proven useful in determining false reporting in previous studies (Merz-Perez et al., 2001; Merz-Perez & Heide, 2004). In order to more accurately depict the general population, researchers should also look to survey individuals not incarcerated or committed to psychiatric facilities.

As noted by Overton et al. (2010), the identification and understanding of the motives of childhood animal abuse can prove to be instrumental in implementing prevention and intervention strategies. If detected early, childhood animal cruelty behaviors could be deterred and prevented by programs geared toward teaching respect and compassion for animals. Such programs (i.e., intensive counseling, animal abuse awareness classes, voluntary reporting procedures, etc.) could be the first step in decreasing the number of animal cruelty events, thus limiting the number of recurrent acts which the current study has linked to future interpersonal violence. If the underlying motives for recurrent acts of childhood animal cruelty could be understood, measures could be taken to focus deterrent methods to mitigate exposure to these motivations.

29

In addition to prevention and intervention tactics, lawmakers have recently begun to take notice of the importance of the relationship between childhood animal cruelty and adult interpersonal violence. In January 2016, the FBI reclassified animal cruelty from an "all other offenses" category to a crime against society, which includes four sub-categories of simple/gross neglect, intentional abuse and torture, organized abuse (i.e. cock fighting, dog fighting, etc.), and animal sexual abuse (The Humane Society of the United States, 2014). On a state level, Tennessee became the first state to create and maintain an animal abuse registry on January 1, 2016. Individuals convicted of animal abuse are placed on the registry for a period of two years for a first offense and five years for a subsequent offenses during which time the individual will be prohibited from adopting any animal from a shelter (TN.gov, 2016). As of 2017 the states of Arizona, Connecticut, Florida, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Oregon, Rhode Island, Texas, and Washington all had legislation written and ready for presentation before their individual governing bodies, which include the creation of an animal abuser registry (NAVS.org, 2017).

The creation of animal abuse registries serve a dual purpose. First, law enforcement officials will be able to deal with recurrent cases of animal cruelty more efficiently by having an easily accessible list of prior abusers within their jurisdiction. This would be an invaluable tool for the officers and agents tasked with allocating funding and resources to stop animal cruelty. Secondly, the creation of animal abuse registries would aid in painting a more accurate picture of current animal abuse trends through the collection of up to date data. This data could be used by social scientists to further explore the relationship between animal cruelty and violent crimes against humans. The current national trend for lawmakers to push for laws such as the ones that

would create animal abuse registries illustrates the importance of childhood animal cruelty as a potential precursor to adult interpersonal violence.

REFERENCES

- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd rev. ed.). Washington, DC: Author.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- Arluke, A., Levin, J., Luke, C., & Ascione, F. R. (1999). The relationship of animal abuse to violence and other forms of antisocial behavior. *Journal of Interpersonal Violence*, 14(9), 963-975.
- Arluke, A., & Madfis, E. (2013). Animal abuse as a warning sign of school massacres: A critique and refinement. *Homicide Studies*, 18(1), 7-22.
- Ascione, F. R. (1993). Children who are cruel to animals: A review of research and implications for developmental psychopathology. *Anthrozoös*, *6*(4), 226-247.
- Ascione, F. R. (2001). Animal abuse and youth violence. *Office of juvenile justice and delinquency prevention bulletin*. Washington, DC: U.S. Department of Justice.
- Ascione, F. R., Thompson, T. M., & Black, T. (1997). Childhood cruelty to animals: Assessing cruelty dimensions and motivations. *Anthrozoös*, 10, 170-197.
- Felthous, A. R., & Kellert, S. R. (1987). Childhood cruelty to animals and later aggression against people: A review. *American Journal of Psychiatry*, 144(6), 710-717.
- Hensley, C. & Tallichet, S. E. (2005). Animal cruelty motivations: Assessing demographic and situational influences. *Journal of Interpersonal Violence*, 20, 1429-1443.
- Hensley, C., & Tallichet, S. E. (2008). The effect of inmates' self-reported childhood and adolescent animal cruelty motivations on the number of convictions for adult violent interpersonal crimes. *International Journal of Offender Therapy and Comparative Criminology*, 52, 175-184.
- Hensley, C., & Tallichet, S. E., & Dutkiewicz, E. L. (2009). Recurrent childhood animal cruelty: Is there a relationship to adult recurrent recurrent interpersonal violence? *Criminal Justice Review*, 34(2), 248-257.

- Hensley, C., Tallichet, S. E., & Dutkiewicz, E. L. (2011). Examining demographic and situational factors on animal cruelty motivations. *International Journal of Offender Therapy and Comparative Criminology*, 55, (3) 492-502.
- Kellert, S. R., & Felthous, A.R. (1985). Childhood cruelty toward animals among criminals and noncriminals. *Human Relations*, 38, 1113-1129.
- MacDonald, J. (1961). The murderer and his victim. Springfield, IL: Charles C. Thomas.
- MacDonald, J. M. (1963). The threat to kill. American Journal of Psychiatry, 120(2), 125-130.
- Mead, M. (1964). Cultural factors in the cause and prevention of pathological homicide. *Bull Menninger Clinic*, 28, 11-22.
- Merz-Perez, L., & Heide, K. M. (2004). *Animal cruelty: Pathway to violence against people*. Lanham, MD: Rowman & Littlefield.
- Merz-Perez, L., Heide, K. M., & Silverman, I. J. (2001). Childhood cruelty to animals and subsequent violence against humans. *International Journal of Offender Therapy and Comparative Criminology*, 45(5), 556-573.
- Miller, K. S., & Knutson, J. F. (1997). Reports of severe physical punishment and exposure to animal cruelty by inmates convicted of felonies and by university students. *Child Abuse and Neglect*, *21*(1), 59-82.
- NAVS.org. (2017). State animal abusers registries proposed in 2017. Retrieved from https://www.navs.org/new-state-animal-abuser-registries-proposed-2017
- Overton, J., Hensley, C., & Tallichet, S. (2012). Examing the relationship between childhood animal cruelty motives and recurrent adult violent crimes toward humans. *Journal of Interpersonal Violence*, 27(5), 899-915.
- Pressley, S. A. (1997, October 22). A bible belt town searches for answers. *The Washington Post*. Retrieved from http://www.washingtonpost.com
- Tallichet, S. E., & Hensley, C. (2004). Exploring the link between recurrent acts of childhood and adolescent animal cruelty and subsequent violent crime. *Criminal Justice Review*, 29(2), 304-316.
- The Humane Society of the United States. (2014). Big news: FBI to start tracking animal cruelty cases. Retrieved from http://blog.humanesociety.org/wayne/2014/09/animal-cruelty-uniform-crime-report.html
- TN.gov. (2016). Tennessee animal abuse registry. Retrieved from https://www.tn.gov/tbi/topic/tennessee-animal-abuse-registry

- Tourangeau, R., Rips, L. J., & Rasinski, K. (2000). *The psychology of survey response*. Cambridge UK: Cambridge University Press.
- Verlinden, S. (2000). *Risk factors in school shootings* (Unpublished doctoral dissertation). Pacific University, Forest Grove, OR.
- Walters, G. D. (2014). Testing the direct, indirect, and moderated effects of childhood animal cruelty on future aggressive and non-aggressive offending. *Aggressive Behavior*, 40(3), 238-249.
- Wright, J., & Hensley, C. (2003). From animal cruelty to serial murder: Applying the graduation hypothesis. *International Journal of Offender Therapy and Comparative Criminology*, 47(1), 71-88.

APPENDIX A

CHILDHOOD ANIMAL CRUELTY MOTIVES AND THEIR RELATIONSHIP TO ADULT INTERPERSONAL CRIMES



Institutional Review

Dept. 4915 615McCallie Avenue Chattanooga, TN 37**269**8 Phone: (423) 4**26**67 Fax: (423) 4**26**52 instrt@utc.edu http://www.utc.edu/irb

MEMORANDUM

TO:	Joseph Blake Ketron Dr. Chris Hensley	IRB # 17-097
FROM:	Lindsay Pardue, Director of Research Integrity Dr. Amy Doolittle, IRB Committee Chair	
DATE:	6/15/17	
SUBJECT:	IRB #17-097: Examining the Motives of Recurrent Childhood Ar Effect on Recurrent Adult Interpersonal Violence	nimal Cruelty and Their

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 # 17-097.

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 <u>http://www.utc.edu/irb</u> or email <u>instrb@utc.edu</u>

Best wishes for a successful research project.

VITA

Joseph Ketron was born in Kingsport, Tennessee, to the parents of George and Jana Ketron. He is the first of three children, with two younger brothers Adam and Jonathan Ketron. He attended Daniel Boone High School in East Tennessee. After graduating, he enrolled at the University of Tennessee at Chattanooga where he competed for the university's track and cross country teams. He received his Bachelor of Science in Criminal Justice in May 2010. After graduation Joseph joined the United States Air Force as a F-16 Avionics Maintainer based out of Shaw AFB, South Carolina. Joseph was deployed to Kandahar Province, Afghanistan in support of Operation Eduring Freedom in October 2012. After receiving an Honorable Discharge from the military in May 2014, he joined the Chattanooga Police Department, completeing the academy in Decemeber 2014. He began using his GI Bill at the University of Tennessee at Chattanooga in August 2015 and will complete his Master of Science in Criminal Justice in December 2017. Joseph is married to Kayla Ketron and has three children, Irelynn Ketron, George Ketron, and Tanner Ashmore.