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Unraveling the Methods of Childhood and Adolescent Cruelty to Nonhuman Animals

ABSTRACT

Studies investigating the specific methods for committing nonhuman animal cruelty have only begun to expose the complexities of this particular form of violence. This study used a sample of 261 male inmates surveyed at both medium- and maximum-security prisons. The study examined the influence of demographic attributes (race, education, and residence while growing up). It also examined situational factors (was the abuse committed alone, did abuser try to conceal the act, was abuser upset by the abuse, what was the perpetrator's age at initial animal cruelty, how frequent was the animal abuse?) and specific methods of animal cruelty (shooting, drowning, hitting or kicking, choking, burning, sex). Regression analyses revealed that white inmates tended to shoot animals more frequently than did non-whites and were less likely to be upset or cover up their actions. Respondents who had sex with animals were more likely to have acted alone and to conceal their cruelty toward animals. However, we failed to find support for a potential link between childhood and adolescent animal cruelty methods and later violence against humans.

Cruelty to nonhuman animals encompasses a broad spectrum of behaviors that span from barely noticeable offenses to those that become widely publicized (Merz-Perez & Heide, 2003). Perhaps sparked by the media's portrayal of the more horrendous acts, public concern has grown and led to renewed interest

in animal cruelty research and the relationship between animal cruelty and later adult interpersonal violence. Unfortunately, four decades of research concerning this topic have produced only inconsistent and sometimes controversial results. Felthous and Kellert (1987a) conducted a meta-analysis of 15 controlled studies that examined the link between childhood animal cruelty and later violence toward humans. They found that five of the studies had found a link between the two behaviors; the others had not. The studies that found a link used direct interviews, defined the terms animal cruelty and personal aggression, and used repeated acts of animal cruelty rather than a single act as an independent variable. The studies that found no link mainly used chart reviews, did not define the behaviors, and used one act of animal abuse as animal cruelty. Recent studies also have been inconsistent in finding a potential link between childhood animal cruelty and later aggression toward humans (Arluke, Levin, Luke, & Ascione, 1999; Flynn, 1999; Merz-Perez & Heide, 2003; Merz-Perez, Heide, & Silverman, 2001; Miller & Knutson, 1997).

Perhaps evidence that is more conclusive in supporting or discrediting the potential link between childhood animal cruelty and adult violence toward humans can be found if contributing factors are considered individually. Such factors may include the method of animal abuse, the type of animal abused, and the motivation for the abuse (Merz-Perez & Heide, 2003; Merz-Perez et al., 2001). In this study, the authors investigate the influence of demographic characteristics and situational factors closely associated with animal cruelty on the chosen methods of childhood and adolescent animal cruelty. We attempt to limit our investigation to describing the specific methods by which animals are abused. Further, we examine the correlates of childhood and adolescent animal cruelty methods—both individually and collectively—on later violence against humans.

Literature Review

The most frequently used definition of animal cruelty by social scientists is (socially unacceptable behavior that intentionally causes unnecessary pain, suffering, or distress to, and/or death of, an animal (Ascione, 1993, p. 228). This preferred definition of animal cruelty omits behaviors that may be socially and culturally acceptable or condoned in other contexts. Such behavior may

include, but is not limited to, laboratory research, hunting, and agricultural and veterinary practices.

Although both researchers and agents of the judicial system have recognized the seriousness of animal cruelty, it was not recognized by practicing clinicians as a legitimate symptom of mental illness until the mid 1980s. The American Psychiatric Association (1987) listed animal cruelty as a symptom of a conduct disorder for the first time in the *Diagnostic and Statistical Manual-III R*. According to the 1994 *Diagnostic and Statistical Manual-IV*, a conduct disorder is 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, p. 90). To be diagnosed with a conduct disorder, an individual must have demonstrated a minimum of 3 of the 15 identified symptoms in the past year. The 15 recognized symptoms of conduct disorder are the following:

1. inflicting physical cruelty on animals;
2. frequent bullying or threatening;
3. frequently starting fights;
4. using a weapon that could potentially cause serious harm;
5. inflicting physical cruelty on other people;
6. theft with confrontation;
7. forcing sex upon someone;
8. intentionally setting fires to cause significant damage;
9. intentionally destroying property;
10. breaking into the property of others;
11. frequently using deception for personal gain;
12. stealing;
13. deliberately disobeying parents' rules;
14. running away; and
15. frequent truancy.

"A substantial proportion [of children diagnosed with conduct disorder] continue to show behaviors in adulthood that meet criteria for antisocial personality disorder" (American Psychiatric Association, 1994, p. 89). Thus, animal cruelty is recognized now as an important indicator of a serious psychological problem.

Empirical research also has supported the possible link between childhood animal cruelty and adult violence toward humans. MacDonald (1963) published one of the first empirical studies. MacDonald studied the childhood characteristics of 48 psychotic and 52 non-psychotic inpatients in a mental hospital who had threatened to commit homicidal behavior. He discovered that sadistic patients often shared three common childhood characteristics: enuresis, fire setting, and animal cruelty (the MacDonald triad). His study sought to determine whether this triad could serve as a preemptive tool to intervene in, and possibly circumvent, violent behavior (Merz-Perez & Heide, 2003, p. 6). He found that the triad could not serve as a warning sign for future homicidal behavior.

At a psychiatric treatment center near St. Louis, Missouri, Hellman and Blackman (1966) conducted further research concerning MacDonald's triad. Eighty-four subjects admitted to the Social Maladjustment Unit between September 1963 and July 1964 were interviewed. Subjects then were divided into two groups: (a) violent and (b) nonviolent offenders. Patients were placed in their respective groups based on the charges that led to their commitment to the center. Hellman and Blackman found 74% of the subjects known to have committed aggressive crimes displayed a background of the complete—or part of the complete—triad behaviors. They also found each single component of the triad related significantly to aggression toward humans.

Despite a half century of research that has established animal cruelty as an important indicator of mental illness and a possible factor contributing to adult violence against humans, very few studies have been conducted examining specific methods of animal cruelty (Felthous & Kellert, 1987a, 1987b; Merz-Perez & Heide, 2003; Merz-Perez et al., 2001). Research examining these understudied dynamics of animal cruelty is critical to understanding further the complex relationship between animal cruelty and later violence against humans.

If research could determine that certain components of animal cruelty were more reliable than were others in predicting future violence against humans, clinicians could determine more easily which childhood and adolescent animal abusers were in most crucial need of intervention. Such an understanding could prove invaluable to society in preserving the lives of innocent

animal and human victims. Some of these crucial dynamics might include (a) method of cruelty, (b) motivation for committing animal cruelty, (c) whether the act was committed alone or with others, (d) and the type of animal abused (Merz-Perez & Heide, 2003; Merz-Perez et al., 2001).

Methods of Childhood and Adolescent Cruelty to Nonhuman Animals

Felthous (1980) was the first to investigate methods of animal cruelty in his study of aggression against cats, dogs, and people. Felthous interviewed 346 male psychiatric patients categorized according to their level of aggressiveness and presence or absence of childhood animal cruelty. Of the 71 patients labeled aggressive, 18 also were classified as repeat animal abusers. In discussing the methods of childhood animal abuse committed, Felthous discovered that 17 of the 18 repeat animal abusers had victimized cats, almost three times the number of respondents who had victimized dogs. Felthous further found that four subjects reported killing cats by hanging, and eight subjects burned or exploded cats and/or dogs. Other methods of animal abuse included limb amputation, decapitation, choking, brutal beatings, fracturing bones, and scalding with hot water (p. 161). Felthous mentioned that three subjects reported tying the tails of animals together over a clothesline in order to observe the animals destroy one another.

Kellert and Felthous (1985) conducted further investigation into the methods of animal cruelty. They interviewed 32 aggressive inmates, 18 moderately aggressive inmates, 52 non-aggressive inmates, and randomly selected 50 non-incarcerated males from Kansas and Connecticut. Participants admitted to a wide range of animal abuse during childhood. Although the purpose of their research was to examine the relationship between childhood animal cruelty and adult aggressiveness, their documentation of the subjects' specific methods of animal abuse opened the door for future research concerning this critical component of animal cruelty.

Felthous and Kellert (1987a) also examined this dimension by using data from the same sample of criminals and non-criminals from their previous study. This second study specifically focused on why certain types of animals were

chosen for a particular method of abuse. Among the most common methods of childhood animal abuse identified were beating ($n = 18$), shooting ($n = 14$), stoning ($n = 11$), and throwing from heights ($n = 10$). Other methods identified included dismembering, exploding, stabbing, burning or electrocuting, breaking bones, and entering into fights (p. 228). Although the numbers were too small for statistical analyses, their qualitative findings indicated a possible relationship between method of abuse and type of animal abused.

Miller and Knutson (1997) used a self-report questionnaire to examine the methods of childhood animal cruelty engaged in by a sample of 314 inmates. The reported methods used by subjects to kill an animal were

1. poison ($n = 17$);
2. drowning ($n = 5$);
3. hitting, beating, or kicking ($n = 43$);
4. shooting ($n = 77$);
5. strangling/smothering ($n = 6$);
6. stabbing ($n = 6$);
7. burning ($n = 5$);
8. throwing against an object ($n = 9$);
9. exploding ($n = 7$);
10. accidental ($n = 16$); and
11. other methods ($n = 6$).

These figures included only childhood animal abuse in which the subject was the prime perpetrator and excluded abuse that did not result in the death of the animal. Unfortunately, the authors did not discuss their findings concerning animal cruelty methods within their control sample of college students from the University of Iowa.

Merz-Perez and Heide (2003) and Merz-Perez et al. (2001)—as part of a larger study on childhood animal cruelty and, later, violence toward humans—investigated methods of animal cruelty by interviewing a randomly selected sample of 45 violent male offenders and 45 nonviolent male offenders incarcerated in a maximum security Florida penitentiary. Participants were coded as violent or nonviolent based on the offense for which each individual was convicted. The information was verified by institutional record and through the interview itself. Fifty-six % of the violent offenders reported having com-

mitted acts of animal cruelty; only 20% of nonviolent offenders reported having engaged in this activity. Concerning the method of abuse chosen by offenders, the sample size for each method was insufficient to produce significant statistical results—although the reported qualitative data were interesting.

The qualitative data indicated that nonviolent offenders were more likely than were violent offenders to be involved in methods of abuse that could be categorized as less severe, or distanced, acts of cruelty. Nonviolent offenders reported having committed childhood animal cruelty by methods of fear ($n = 1$), shooting ($n = 6$), and forced fighting ($n = 3$). These acts could be committed without close physical contact with the animal. Violent offenders, however, reported having committed acts of cruelty that required actual physical abuse at the hands of the offender. These offenders committed direct acts of violence by engaging in sexual activity with the animal ($n = 3$), beating, kicking, or stomping ($n = 5$), stabbing ($n = 1$), pouring chemical irritants on ($n = 2$), burning ($n = 1$), and dismembering ($n = 2$). Nonviolent offenders did not report committing any of the severe acts of animal cruelty that included physical contact (Merz-Perez & Heide, 2003; Merz-Perez et al., 2001).

Purpose of the Current Study

Animal cruelty is a complex phenomenon about which numerous questions remain regarding its related factors such as the methods used, types of animals abused, and the motives for such behavior. Despite their potential for identifying individuals at greater risk for violence, these factors are currently understudied. Merz-Perez and Heide (2003) included variables measuring subjects' emotional response to their own acts of animal cruelty and the potential influence of others in the commission. However, their numbers often were insufficient to permit quantitative analyses. Also, they noted that previous studies of animal abuse had underused demographic variables. This study examines the following:

1. methods by which animal cruelty was committed during childhood and adolescence as influenced by subjects' race, education, and residence while growing up;

2. situational factors such as whether the abuse was committed alone, whether the abuser attempted to conceal the act; and whether the abuser was upset by committing the abuse;
3. the perpetrator's age at initial cruelty to animals; and
4. the frequency of animal abuse in childhood and adolescence.

In addition, the study examines the predictors of childhood and adolescent animal cruelty methods on later human violence.

Merz-Perez & Heide (2003) noted that factors such as gender, race, residence, social class, and employment status were not key issues in the studies they cited (p. 51). Given their underuse and lack of predictability, we did not expect that race, education, or residence would significantly influence animal cruelty methods. However, given findings in previous studies, we expected our situational variables to have an impact. Finally, we would expect that certain types of methods requiring close contact (drowned, hit or kicked, choked, burned, or sexually assaulted) could be more predictive of later violence against humans (Merz-Perez & Heide; Merz-Perez et al., 2001).

Methodology

Participants

A Southern state department of corrections granted permission to distribute questionnaires to male inmates in two medium-security prisons and in one maximum-security prison between May and June 2003. The researchers delivered enough questionnaires for each inmate in each facility. The correction counselors in each facility then were responsible for distributing the surveys to each inmate. Each questionnaire contained a cover letter explaining that participation was voluntary. Inmates were asked to return their completed questionnaires in a stamped, self-addressed envelope within three weeks of distribution. Inmates were told it would take approximately 20 minutes to complete the 39-item questionnaire. In addition, they were informed of their anonymity while participating in the project. No incentives were given for completion of the survey. Of the 2,093 inmates incarcerated at the 3 facilities, a total of 261 agreed to participate in the study, yielding a response rate of

12.5%. Although this response rate appears low, many prison studies dealing with sensitive issues attract 25% or fewer respondents (Hensley, Rutland, & Gray-Ray, 2000). Given the difficult nature of this type of research, such a limited sample still is useful.

Table 1 displays the characteristics of the state prison population and the sample. A comparison of the racial composition, age distribution, and type of offense committed by the respondents and the state prison population revealed no significant differences. Thus, the sample appears to be representative of the state prison population in terms of these variables.

Table 1. Population and Sample Characteristics

Prison Population Characteristic	Sample N	%	<i>n</i>	%
Race:				
White	10,654	67.0	182	70.0
Other	5,280	33.0	78	30.0
Type of Offense:				
Interpersonal				
Violent Crime	8,000	50.2	125	47.9
Other Crime	7,934	49.8	136	52.1
Median Age	33 years		33.5 years	

Measures

The primary goal of the present study was to examine what methods inmates used while engaging in animal cruelty as children (12 years of age or younger) and/or adolescents (13 to 18 years old). The variables were derived from previous studies that examined the link between childhood animal cruelty and later violence toward humans (Arluke et al., 1999; Ascione, Thompson & Black, 1997; Boat, 1994; Flynn, 1999; Merz-Perez & Heide, 2003; Merz-Perez et al., 2001).

Inmates were asked to indicate what they did to hurt or kill animals by circling each of the methods listed on the survey that they had used during

their childhood and adolescence. These included (a) drowned, (b) hit or kicked, (c) shot, (d) choked, (e) burned, and/or (f) had sex with animals (Boat, 1994). Animal was defined as pet, stray, farm, or wild (Merz-Perez & Heide, 2003; Merz-Perez et al., 2001). Each response for each method was coded so that 0's had not used that method and 1's had used that method. The six items served as the dependent variables for some analyses. However, in our examination of the correlates of methods on later human violence, these variables were used as the independent variables.

Inmates also were asked a series of questions regarding their interpersonal violent histories. They included:

1. Have you ever been convicted of murder or attempted murder?;
2. Have you ever been convicted of rape or attempted rape?; and
3. Have you ever been convicted of aggravated assault?

These questions were coded 0 = no and 1 = yes. More important, inmates were asked how many times they had been convicted of each of these interpersonal crimes. To develop a cumulative score of repeated interpersonal violence, we then added the number of times each inmate had been convicted of these behaviors. The cumulative score for each inmate was the dependent variable for the model.

Demographic characteristics (race, educational level, and residence while growing up) were recorded and used as predictor variables. Respondents also were asked if they had hurt or killed the animals alone, if they had covered up what they had done to the animals, and if hurting or killing the animals had upset them (Ascione, Thompson, & Black, 1997; Merz-Perez & Heide, 2003; Merz-Perez et al., 2001). Finally, inmates were asked how many times they had hurt or killed animals and how old they were when they first committed animal cruelty. These items served as the independent variables in some analyses.

Results

Of the 112 inmates who had engaged in animal cruelty, more than 64% reported that they had shot animals; approximately 45% had either hit or kicked ani-

mals (Table 2). Approximately 21% reported they had choked animals; approximately 15% had either drowned, burned, or had sex with animals. Inmates could select more than one method, resulting in a total cumulative percentage considerably higher than 100%.

Table 2. Frequencies and Percentages of Inmates Who Committed Childhood and/or Adolescent Animal Cruelty and Their Methods While Engaging in These Acts ($n = 112$)

Method	<i>n</i>	%
Drowned	16	14.3
Hit or Kicked	50	44.6
Shot	72	64.3
Choked	24	21.4
Burned	17	15.2
Sexual	16	14.3

Table 3 presents the zero-order correlation matrix between the demographic and situational factors and the methods of childhood animal cruelty. White respondents were more likely to have grown up in rural areas. 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.

White inmates and those who resided in rural areas while growing up were more likely to have shot animals. Respondents who did not become upset after committing animal cruelty and those who committed multiple acts of animal cruelty were more likely to have shot animals. Inmates who had hurt or killed animals alone were less likely to have shot animals.

Inmates who reported covering up their acts of animal cruelty, who had committed animal cruelty multiple times, and who were younger at that time were more likely to have choked animals. Inmates who did not become upset after committing animal cruelty were more likely to have burned animals. Finally, respondents who did not become upset after committing animal cruelty were more likely to have had sex with animals.

Respondents who had drowned animals were also more likely to have choked and burned animals. Respondents who had hit or kicked animals also were more likely to have burned animals but were less likely to have shot animals. Inmates who had choked animals also were more likely to have burned and to have had sex with animals. Respondents who had burned animals also were more likely to have had sex with animals. None of the relationships exceeded a value of .41, indicating no multi-collinearity.

Table 3. Zero-Order Correlation Matrix—Demographic and Situational Factors and Methods of Animal Abuse

	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	Y ₁	Y ₂	Y ₃	Y ₄	Y ₅
X ₂		-.10											
X ₃	.25*	.07											
X ₄	.03	.02	.11										
X ₅	-.16	-.09	.00	.09									
X ₆	-.07	.17	.15	.10	.05								
X ₇	.01	-.10	-.04	.05	.14	-.17							
X ₈	-.13	.11	.07	.09	-.05	.18	-.35*						
Y ₁	-.10	-.12	-.02	-.01	.12	.01	.12	-.02					
Y ₂	.02	-.01	.06	.18	.15	.10	.14	-.05	.15				
Y ₃	-.30*	.04	-.24*	-.20*	-.09	-.25*	.35*	-.17	.04	-.19*			
Y ₄	-.01	-.12	.13	.15	.25*	-.10	.27*	-.20*	.22*	.41*	-.16		
Y ₅	.03	-.03	.01	-.17	.10	-.21*	.17	-.07	.25*	.12	-.05	.26*	
Y ₆	-.01	-.12	-.12	-.19	.18	-.25*	.18	-.12	.05	.10	-.12	.28*	.33*

* Denotes statistical significance at the .05 level.

Coding of Independent Variables: (X₁) Race (0 = white, 1 = non-white); (X₂) Education (0 = 8th grade or less, 1 = some high school, 2 = completed high school, 3 = some college, 4 = completed college, 5 = graduate or professional school after college); (X₃) Residence (0 = rural area; 1 = urban area); (X₄) Hurt or Kill Animals Alone (0 = no, 1 = yes); (X₅) Cover Up Hurting or Killing Animals (0 = no, 1 = yes); (X₆) Committing Animal Cruelty Upset You (0 = no, 1 = yes); (X₇) Number of Times Hurt or Killed Animals (1 = once, 2 = twice, 3 = more than twice); (X₈) Age When First Hurt or Killed Animals (continuous variable). Coding of Dependent Variables: (Y₁) Drowned (0 = No, 1 = Yes); (Y₂) Hit or Kicked (0 = No, 1 = Yes); (Y₃) Shot (0 = No, 1 = Yes); (Y₄) Choked (0 = No, 1 = Yes); (Y₅) Burned (0 = No, 1 = Yes); (Y₆) Sexual (0 = No, 1 = Yes).

Because the dependent variables were dichotomous, logistic regression analyses were performed to test what, if any, influence the predictor variables had on each method of childhood and adolescent animal cruelty. According to Table 4, the most statistically salient variable in the six models was whether the person had covered up the animal cruelty. Inmates who had hidden the animal cruelty were more likely to have had sex with animals but less likely to have shot animals. Respondents who had hurt or killed animals alone were less likely to have had sex with animals. White inmates and those who had committed multiple acts of animal cruelty were more likely to have shot animals. Finally, inmates who had become upset after committing animal cruelty were less likely to have shot animals. The independent variables accounted for between 11% and 42% of the total variance in the six models.

Table 4. Summary of Logistic Regression Beta Weights

Variable	Drowned		Hit or Kicked		Shot		Choked		Burned		Sexual	
	B	Odds Ratio	B	Odds Ratio	B	Odds Ratio	B	Odds Ratio	B	Odds Ratio	B	Odds Ratio
X ₁	-.99	.37	-.10	.91	-1.81	.16*	-.42	.66	.57	1.76	-.14	.87
X ₂	-.26	.77	-.15	.86	.03	1.03	-.29	.75	.10	1.10	-.21	.81
X ₃	.14	1.12	.40	1.49	-.20	.82	.97	2.64	.40	1.49	-.82	.44
X ₄	-.46	.63	.81	2.26	-1.31	.27	.70	2.02	-1.18	.31	-1.42	.24
X ₅	.30	1.35	.55	1.74	-1.27	.28*	.92	2.51	.78	2.18	1.42	4.15*
X ₆	.32	1.37	.36	1.43	-1.30	.27*	-.55	.58	-1.31	.27	-1.60	.20
X ₇	.84	2.32	.28	1.32	1.02	2.78*	.96	2.60	.77	2.17	.57	1.78
X ₈	.03	1.04	-.03	.97	-.02	.98	-.13	.88	.03	1.03	-.12	.89
Pseudo R ²	.11		.12		.42		.29		.19		.32	

* Denotes statistical significance at the .05 level.

Coding of Independent Variables: (X₁) Race (0 = white, 1 = non-white); (X₂) Education (0 = 8th grade or less, 1 = some high school, 2 = completed high school, 3 = some college, 4 = completed college, 5 = graduate or professional school after college); (X₃) Residence (0 = rural area; 1 = urban area); (X₄) Hurt or Kill Animals Alone (0 = no, 1 = yes); (X₅) Cover Up Hurting or Killing Animals (0 = no, 1 = yes); (X₆) Committing Animal Cruelty Upset You (0 = no, 1 = yes); (X₇) Number of Times Hurt or Killed Animals (1 = once, 2 = twice, 3 = more than twice); (X₈) Age When First Hurt or Killed Animals (continuous variable).

Using ordinary least squares regression, we also investigated the predictive value of animal cruelty methods on later violence against humans. Neither individual nor collective methods (using a summed score) of childhood and

adolescent animal cruelty significantly predicted later adult interpersonal violence. Collectively, only 8% of the total variance in the model was explained by the methods of childhood and adolescent animal cruelty.

Discussion

The present study focused on the methods by which animals were abused and the situational and demographic factors that influenced those who abused them. In our sample, similar to previous findings (Merz-Perez & Heide, 2003; Merz-Perez et al., 2001; Miller & Knutson, 1997), shooting was the method respondents most frequently used. Relative to the same studies, their next most frequently used method was hitting or kicking followed by choking, burning, drowning, and having sex with an animal. Methods other than shooting require more direct contact with the animal. Many individuals who used one of these other methods also tended to have used more than one of them. Thus, this finding suggests a potentially useful dichotomy for future studies.

A similar division emerged between two of the six multivariate models predictive of shooting animals and having sex with animals. In the first model, white inmates and those who committed multiple acts of animal cruelty more frequently tended to shoot animals. In addition, those who shot animals were less likely to be upset about, or cover up, their actions. This suggests that there may be sub-cultural support for shooting (Merz-Perez & Heide, 2003). Shooting does not require close physical contact with the animal, resulting in a possible lack of empathy toward the animal and a lack of recognition of an animal's sentience (Merz-Perez & Heide). In addition, possibly no ramifications exist for such behavior. As Merz-Perez and Heide have observed, the phenomenon of animal cruelty must be examined within cultural contexts and the parameters of cultural norms (p. 154).

In the second model, inmates who reported having sex with animals were less likely to have acted alone but were more likely to conceal their behavior. Case studies of serial killers have documented that some of them were exposed to, and subsequently engaged in, later acts of bestiality in the presence of others (Merz-Perez & Heide, 2003; Wright & Hensley, 2003). Intuitively, it would make sense that children and adolescents would want to conceal

their sexual contact with animals, especially in light of the cultural taboo against such behavior. However, we also found that the methods of animal cruelty we examined taken either separately or together failed to predict an inmate's history of adult interpersonal violence.

Although the present study provides an initial step in examining the methods of animal cruelty, there are both strengths and weaknesses associated with it. One of the study's strengths lies in its use of understudied factors previously associated with the commission of animal cruelty among a sample of prison inmates. The present sample of male inmates incarcerated in medium- and maximum-security prisons in a southern state closely mirrors the larger inmate population of the state. These findings could serve as a beginning of a demographic and situational profile about those who engage in these types of animal cruelty.

However, weaknesses also exist. Although other prison studies dealing with sensitive topics have yielded relatively low response rates, our 12.5% return rate is very low for survey-based methodology. Thus, our results may not generalize to the larger population of inmates. The present study does not include a comparison group, which also possibly could affect the generalizability of the study, nor did we verify the accuracy of the inmates' self-reported offenses (Merz-Perez & Heide, 2003). Moreover, by relying on pencil and paper self-reports only, we narrowed the sample and may have excluded illiterate inmates. Finally, the data analyzed in the study were based on prisoner's self-reported behavior, potentially compromising the validity of the inmates' reported behaviors (Merz-Perez & Heide).

As discussed by previous researchers (Felthous & Kellert, 1987a, 1987b; Merz-Perez et al., 2001), an examination of a wider range of factors affecting animal cruelty may further our understanding of animal cruelty and, perhaps, how the abuse of animals may or may not lead to later violence against animals and humans. Although the few previous studies conducted identify animal cruelty methods used, researchers had not yet used them in quantitative analyses for understanding animal cruelty itself or as it may portend of later adult violence (Felthous, 1980; Kellert & Felthous, 1985; Merz-Perez et al.; Merz-Perez & Heide, 2003). Thus, this study sought to expand on these few previous investigations by focusing on animal cruelty methods.

Given some of our study's methodological limitations already cited, we urge that more investigations be conducted using methods of animal cruelty as it still may be linked to predicting later adult violence. Both the specific act of cruelty and the circumstances of it were considered here and should continue to be studied along with the perpetrators and the type of animal abused. This descriptive study shows us the importance in distinguishing between methods of animal cruelty that require close contact (drowned, hit or kicked, choked, burned, or sexually assaulted) as opposed to those that do not (shot). Further, it suggests using a combination of both quantitative (survey questionnaires) and qualitative (face-to-face interviews) approaches to the future investigations of animal cruelty.

Note

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