Correlates of cruelty to animals in the United States: Results from the National Epidemiologic Survey on Alcohol and Related Conditions

Michael G. Vaughn\textsuperscript{a,}\textsuperscript{*}, Qiang Fu\textsuperscript{b}, Matt DeLisi\textsuperscript{c}, Kevin M. Beaver\textsuperscript{d}, Brian E. Perron\textsuperscript{e}, Katie Terrell\textsuperscript{f}, Matthew O. Howard\textsuperscript{g}

\textsuperscript{a}School of Social Work and Department of Community Health, Division of Epidemiology, School of Public Health, Saint Louis University, 3550 Lindell Boulevard, St. Louis, MO 63103, United States
\textsuperscript{b}Department of Biostatistics, School of Public Health, Saint Louis University, St. Louis, MO, United States
\textsuperscript{c}School of Social Work, Saint Louis University, St. Louis, MO, United States
\textsuperscript{d}Criminology and Criminal Justice Studies, Department of Sociology, Iowa State University, Ames, IA, United States
\textsuperscript{e}College of Criminal Justice and Criminal Justice, Florida State University, Tallahassee, FL, United States
\textsuperscript{f}School of Social Work, University of Michigan, Ann Arbor, MI, United States
\textsuperscript{g}School of Social Work, University of North Carolina, Chapel Hill, NC, United States

\textbf{Abstract}

Objective: To examine the sociodemographic, behavioral, and psychiatric correlates of cruelty to animals in the US.

Materials and methods: Data were derived from a nationally representative sample of adults residing in the US Structured psychiatric interviews (N = 43,093) were completed by trained lay interviewers between 2001 and 2002. Personality, substance use, mood, and anxiety disorders and cruelty to animals were assessed with the Alcohol Use Disorder and Associated Disabilities Interview Schedule (DSM-IV) version.

Results: The lifetime prevalence of animal cruelty in US adults was 1.8%. Men, African-Americans, Native-Americans/Asians, native-born Americans, persons with lower levels of income and education and adults living the western region of the US reported comparatively high levels of cruelty to animals, whereas Hispanics reported comparatively low levels of such behavior. Cruelty to animals was significantly associated with all assessed antisocial behaviors. Adjusted analyses revealed strong associations between lifetime alcohol use disorders, conduct disorder, antisocial, obsessive-compulsive, and histrionic personality disorders, pathological gambling, family history of antisocial behavior, and cruelty to animals.

Conclusions: Cruelty to animals is associated with elevated rates observed in young, poor, men with family histories of antisocial behavior and personal histories of conduct disorder in childhood, and antisocial, obsessive-compulsive and histrionic personality disorders, and pathological gambling in adulthood. Given these associations, and the widespread ownership of pets and animals, effective screening of children, adolescents and adults for animal cruelty and appropriate mental health interventions should be deployed.

© 2009 Elsevier Ltd. All rights reserved..

1. Introduction

Cruelty to animals, frequently referred to as animal cruelty, is defined as treatment of animals that causes gratuitous, unwarranted or unjustifiable suffering or harm (including death). Animal cruelty is gaining recognition as a serious social issue that may be reflective of more extensive psychopathology at the individual level (McPhedran, 2009). In recognition of the potential clinical relevance of animal cruelty, systematic research on animal cruelty in relation to psychopathology and antisocial behavior began to emerge in the 1980s (Douglas et al., 1986; Ressler et al., 1980).

In 1987, the Diagnostic and Statistical Manual of Mental Disorders, Third Edition-Revised (DSM-III-R) incorporated animal cruelty as a diagnostic criterion for conduct disorder (CD) and Antisocial Personality Disorder (ASPD) (American Psychiatric Association, 1987).

Research on the etiology of animal cruelty is sparse. Two general threads of research examine the issue. On one hand, animal cruelty is viewed as a consequence of an individual’s exposure to criminogenic environments (Currie, 2006; Duncan et al., 2005; Petersen and Farrington, 2007; Duncan, 2002). For instance, having witnessed animal cruelty in childhood appears to be associated with later acts of animal abuse (Thompson and Gullone, 2006) and studies of correctional and community samples indicate that males who...
are physically punished in childhood are more likely to commit subsequent acts of animal cruelty (Miller, 2001; Flynn, 1999). Despite some inconsistency across studies (Felthous and Kellert, 1987), research on animal cruelty suggests this behavior is associated with violence toward humans (Arluke et al., 1999; Miller, 1997; Tallichet, 2004; Merez-Perez and Heide, 2001). Other research examines pathological offenders, focusing on the correlation between child and adolescent animal cruelty and subsequent homicide offending. Prevalence estimates of lifetime animal cruelty among sexual murderers are exceptionally high with 36% and 46%, respectively, engaged in animal cruelty during childhood and adolescence (Douglas et al., 1986). Among sexual murderers, animal cruelty in childhood commonly co-occurs with childhood sexual victimization (Ressler et al., 1980). Other studies have linked animal cruelty to additional extreme forms of criminal offending including arson, bestiality, and violent interpersonal assault (Hensley and Tallichet, 2006; Hensley, 2008, 2005; Becer et al., 2004).

Unfortunately, the etiological nature of these relationships is unresolved. One factor hypothesized to underlie animal cruelty and violence is a deficit in the ability to empathize (McPhedran, 2009; Petersen and Farrington, 2007; Felthous and Kellert, 1987). Demographically, males and persons with lower educational attainment are more likely than their counterparts to commit acts of animal cruelty (Hensley and Tallichet, 2006; Hensley, 2008, 2005). Other sociodemographic relationships to animal cruelty, such as racial, ethnic, regional, and income differences remain largely unexplored. A major limitation of studies to date has been their use of small and nonrepresentative samples leading to uncertainty regarding the generalizability of prior animal cruelty findings. Finally, the psychiatric epidemiology of animal cruelty has received little attention, particularly examinations of psychiatric disorders associated with animal cruelty. Although animal cruelty is included in the DSM-IV-TR diagnostic criteria sets for CD and ASPD, specific antisocial behaviors associated with animal cruelty have not been adequately delineated.

The purpose of this study was to examine associations between psychiatric disorders and among persons reporting that they had been intentionally cruel to animals compared to persons without a history of animal cruelty using a nationally representative sample of US adults. The primary study aims were to (1) examine the correlates of lifetime animal cruelty in relation to sociodemographic characteristics, antisocial behaviors, and lifetime mood, anxiety, and personality disorders, and (2) estimate the strength of associations between animal cruelty and these characteristics while controlling for sociodemographic factors and substance use/psychiatric disorders.

2. Materials and methods

2.1. Participants

Stud...
3 Results

3.1 Sociodemographic characteristics

Table 1 provides comparisons of the NESARC sociodemographic sample characteristics of persons who reported a lifetime history of animal cruelty and those who self-reported no lifetime history of animal cruelty. The overall prevalence animal cruelty in US adults was 1.8%. Unadjusted analyses reveal that persons reporting a lifetime history of animal cruelty were more likely to be male (OR = 6.10, 95% CI = 4.90–7.59), born in the US (OR = 1.96, 95% CI = 1.26–3.04), African-American (OR = 1.36, 95% CI = 1.06–1.76), and less likely to be Latino/Hispanic (OR = 0.63, 95% CI = 0.44–0.90). Compared to married and widowed/separated individuals never married persons were less likely (OR = 0.75, 95% CI = 0.57–0.97) to report animal cruelty. Uniformly, younger persons and individuals with lower levels of annual household income were more likely to report animal cruelty. Compared to other regions of the country (Northeast, Midwest, South), persons from the West were more likely than other areas to report animal cruelty.

3.2 Animal cruelty and associated antisocial behaviors

The prevalence of all antisocial behaviors was higher among persons with a lifetime history of animal cruelty compared to persons without a lifetime history of animal cruelty. The most common behavior for persons with a history of animal cruelty was doing something that one could be arrested for irrespective of whether they were caught or not (61.70%, CI = 57.31–65.92%). The strongest associations between antisocial behaviors and animal cruelty were found for robbing or mugging another person (OR = 17.93, 95% CI = 11.49–27.97), fire setting (OR = 12.79, 95% CI = 8.85–18.49), and threatening someone (OR = 12.64, 95% CI = 9.90–16.14).

3.3 Multivariate logistic regression analysis assessing associations between animal cruelty and lifetime psychiatric comorbidity

Table 3 compares prevalence rates of lifetime psychiatric comorbidity for persons with and without a history of animal...
cruelty. Odds ratios are adjusted for sociodemographic factors (i.e., race, sex, education, marital status, age, income, region, urbanicity) and previously described lifetime DSM-IV psychiatric diagnoses. The most common psychiatric disorders among persons with a history of animal cruelty were any lifetime alcohol use disorder (63.69%, CI = 58.71–68.38%), family history of antisocial behavior (53.87%, CI = 49.40–58.28), lifetime nicotine dependence (36.16%, CI = 31.39–41.21%), and antisocial personality disorder (35.84%, CI = 31.53–40.40%).

Largest adjusted odds ratios were found for conduct disorder (AOR = 9.53, 95% CI = 6.07–14.97) and antisocial personality disorder (AOR = 6.68, 95% CI = 5.05–8.85). Smaller yet significant associations were found for pathological gambling (AOR = 2.23, 95% CI = 1.04–4.78), a family history of antisocial behavior (AOR = 2.12, 95% CI = 1.73–2.58), obsessive–compulsive personality disorder (AOR = 1.65, 95% CI = 1.24–2.20), histrionic personality disorder (AOR = 1.62, 95% CI = 1.14–2.31), and lifetime alcohol use disorder (AOR = 1.56, 95% CI = 1.20–2.03).

4. Discussion

To our knowledge, this is the first national study examining the association between animal cruelty and psychiatric disorders. Findings indicated that the prevalence of animal cruelty varied by sociodemographic status, was associated with all antisocial behaviors, and following adjustments for numerous confounding variables was associated with several lifetime psychiatric diagnoses. Specifically, our investigation found that the prevalence of animal cruelty was higher among males, African-Americans and Native-Americans/Asians, native-born Americans, and individuals with lower levels of income and education. There was a regional effect in that, compared to the western region of the US, individuals in other regions were less likely to report a lifetime history of animal cruelty. We can only speculate that this might stem from human–animal relationships in ranch or similar settings involving livestock or larger predatory animals. Animal cruelty was also associated with a broad array of antisocial behaviors particularly behaviors that exercise a physical threat over other persons such as robbery, harassment, and forcing someone to have sex. Setting fires on purpose was also highly associated with animal cruelty suggesting that previous clinical research related to these two behaviors is supported (Douglas et al., 1986; Ressler et al., 1980; Becer et al., 2004).

In controlled analyses, animal cruelty was uniquely associated with numerous psychiatric disorders characterized by self-control deficits including lifetime alcohol use disorder, pathological gambling, conduct disorder and antisocial personality disorder, and several personality disorders such as obsessive–compulsive, paranoid, and histrionic. Animal cruelty was also associated with a family history of antisocial behavior. Although it was unsurprising that CD/ASPD and a family history of antisocial behavior were highly associated with animal cruelty, significantly findings for associations of obsessive–compulsive and histrionic personality disorders and animal cruelty suggests follow-up studies on these disorders are warranted. While emotional and cognitive dysregulation are
common in these disorders, we speculate that the rigidity of persons with obsessive–compulsive personality disorder could be reflected in aggressive behavior toward animals (e.g., when pets have excre- tory “accidents” in the home), and the dependent reliance on others (including perhaps pets) for nurturance and support of persons with histrionic personality disorder may predispose them to vio- lent actions toward pets.

Given the significant associations found between animal cruelty and other antisocial behaviors and psychopathology, animal cruelty in childhood appears to be a marker for a host of maladaptive behaviors (McPhedran, 2009; Petersen and Farrington, 2007). Thus, youth should be screened for animal cruelty in clinical and other service settings. Although identification of animal cruelty in childhood provides a potential opportunity for prevention interven- tions, it is difficult to determine whether animal cruelty after age 15 is a consequence of a developing psychiatric disorder or sub- stance intoxication – chronic or episodic. The current study was unable to determine these causal sequences. Nevertheless, findings from this study provide a unique psychiatric epidemiologic in- formed report of the problem previously unavailable.

Present study findings need to be interpreted within the context of several limitations. The major limitation is the data are cross- sectional. Therefore, associations between animal cruelty and psy- chiatric comorbidity do not resolve etiological issues previously identified. However, findings do suggest that the origins of animal cruelty and psychopathology, in particular impulse-control disorders, are intertwined. The prognostic relationship between animal cruelty and psychiatric disorders will require longitudinal study designs. The NESARC excludes persons under age of 18 and there- fore relies on retrospective self-reported recall of animal cruelty spanning potentially long swaths of time. There may also be re- sponse bias in that persons are unwilling to admit being cruel to an animal and those that do report the more callous-unemotional and antisocial. Given that NESARC is a nationally representa-
Contributors

Michael Vaughn conceptualized the study, led the literature review and study design, and analytic strategy. Qiang Fu conducted the statistical analysis. Matt DeLisi, Kevin Beaver, Katie Terrell, Brian Perron, and Matthew Howard reviewed literature and contributed writing.

Role of the funding source

None declared.

Conflict of interest

The authors have no financial or personal conflicts of interest.

Acknowledgement

The authors are grateful for support from NIH Grants: DA021405 (Dr. Howard) and K07CA104119 (Dr. Fu).

References


Thompson KL, Gullone E. An investigation into the association between the witnessing of animal abuse and adolescents’ behavior toward animals. Society and Animals 2006;14:222–43.