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The Relationship Between Domestic Violence and Animal Abuse

An Australian Study

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Several North American studies have found a connection between domestic violence and animal abuse. This article reports on the first Australian research to examine this connection. A group of 102 women recruited through 24 domestic violence services in the state of Victoria and a nondomestic violence comparison group (102 women) recruited from the community took part in the study. Significantly higher rates of partner pet abuse, partner threats of pet abuse and pet abuse by other family members were found in the violent families compared with the nondomestic violence group. As hypothesized, children from the violent families were reported by their mothers to have witnessed and committed significantly more animal abuse than children from the nonviolent families. Logistic regression analyses revealed, for the group as a whole, that a woman whose partner had threatened the pets was 5 times more likely to belong to the intimate partner violence group.

Keywords: animal abuse; domestic violence; family violence; pet abuse

A nimal abuse, or cruelty to animals, became a social policy issue in Western industrialized societies in the 18th century (Favre & Tsang, 1998; Kellert & Felthous, 1985). Public awareness of the plight and status of animals had increased gradually over the preceding centuries due largely to their widespread acceptance as companion (or pet) animals within the home. The first case report linking interpersonal violence and animal abuse was published in 1806 and documented the behavior of an adult male who was

violent toward both animals and humans (Pinel, 1806/1962). Early empirical research, however, focused on the connection between animal abuse committed in childhood and violence toward humans in adulthood using the retrospective self-reports of acts of animal cruelty in the childhood histories of violent incarcerated adult males (e.g., Hellman & Blackman, 1966; Kellert & Felthous, 1985; Merz-Perez, Heide, & Silverman, 2001).

The connection between interpersonal violence and animal abuse, both committed in adulthood, has been examined in studies involving violence between family members (Ascione, 1998; Carlisle-Frank, Frank, & Nielsen, 2004; Faver & Strand, 2003; Flynn, 2000). Determining the extent to which domestic violence co-occurs with animal abuse is hampered by the nature of the group under investigation. Issues of access, security, privacy, and respect are of paramount importance in conducting this type of research, as the participants are typically victims of recent abuse—recruitment of participants is hence very time consuming and difficult. Although domestic violence can occur between any members of a family, all published quantitative studies directly investigating animal abuse to date have surveyed women who have experienced intimate partner violence, usually during their stay in a secure shelter (e.g., Ascione, 1998; Carlisle-Frank et al., 2004; Flynn, 2000) with Faver and Strand (2003) surveying both shelter residents and members of battered women's groups.

In one of the first studies examining this issue, Ascione (1998) reported outcomes based on a sample of 38 women who were interviewed during their stay at a shelter for battered partners in Utah. Of the women with pets (n = 28), 57% reported that their male partner had hurt or killed one of their pets. Threats of pet abuse and/or actual pet abuse were reported by 71% of the women with pets. Additionally, of the 22 women with children, 32% reported that one of their children had hurt or killed one of their pets.

Flynn (2000) reported on 107 women residing temporarily at a South Carolina shelter. Of the women with pets (n = 43), 26% reported that their male partner had hurt their pets and 40% reported threats of pet abuse by their partner. One woman reported that her child had harmed a pet and another woman reported that her child had threatened to harm the family pet.

Faver and Strand (2003) reported on data collected from two rural and four urban battered women's shelters in a southeastern state (U.S.). Of the 41 pet-owning women, 46.3% reported their partner had actually harmed their pets and 48.8% reported their partner had threatened their pets.

Carlisle-Frank et al. (2004) provided surveys to seven domestic violence shelters in upstate New York. A total of 34 women with pets completed the surveys. A small percentage of the women's abusive partners were female.

Physical partner pet abuse was reported by 53% of women with 61% of women in families where partner pet abuse had occurred reporting their children had witnessed their partner abusing their pets.

None of the domestic violence studies reviewed above included a comparison group of women who had not experienced domestic violence. To explore this comparison, Ascione et al. (2007) surveyed 101 women recruited from five domestic violence shelters in Utah and 120 nonshelter women from the community who had no history of domestic violence. All participants were either current or recent (during the previous 12 months) pet owners. More than half (54%) of the shelter women and 5% of the nonshelter women reported partner pet abuse. Partner threats of harm to pets were reported by 53% of the shelter women and 13% of the nonshelter women. Researchers in previous studies on the connection between domestic violence and animal abuse asked each mother with children to report on all of her children, regardless of the relationship the child had with the pet or the age of the child (e.g. Ascione, 1998; Flynn, 2000). In the recent study by Ascione et al. (2007), mothers in both the shelter and nonshelter groups were asked to select one child between 5 and 18 years who had the most contact, either positive or negative, with pets. For their selected child, 62% of the shelter women and 3% of the nonshelter women reported the witnessing of pet abuse in their homes.

Walton-Moss, Manganello, Frye, and Campbell (2005) conducted a study on risk factors for intimate partner homicide that included threat and abuse of pets in 11 geographically dispersed cities in the United States. The control group of urban women were identified using random stratified digit dialing. A total of 427 women had experienced intimate partner violence in the past 2 years, meeting the criterion for inclusion in the abused group. A similarly sized group of nonabused women (n = 418) was randomly selected from all nonabused women in the control group. The two groups differed on many demographic measures including age, education level, number of children, and relationship status of the women. Results revealed that the risk factors for women being abused were younger age, having fair or poor mental health, and the abusive partner being a former partner. Several characteristics of the abusive partner were found to be risk factors for abuse of the woman including, most notably, threat or actual abuse of pets. The other partner-related risk factors included having a problem with drug use or alcohol use, not graduating high school, and having fair or poor mental health.

The consequences of domestic violence can be experienced by women and children as primary victims (intimate partner abuse, child abuse) or as secondary victims (women and children witnessing domestic violence) or both (Office of Women's Policy, 2001). An Australian study conducted in

the state of Victoria concluded that intimate partner violence "is the leading contributor to death, disability and illness in Victorian women aged 15-44" (Victorian Health Promotion Foundation, 2004, p.10). Moreover, children and adolescents witnessing violence in the home are more likely to develop behavioral and emotional problems than children living in nonviolent homes (Edleson, 1999; Ingoldsby, Shaw, Owens, & Winslow, 1999; Kolbo, Blakely, & Engleman, 1996). Specifically, Koenen, Moffitt, Caspi, Taylor, and Purcell (2003) found that 5-year-old children exposed to high levels of domestic violence had, on average, an 8 point lower IQ score than 5-year-olds whose mothers reported no domestic violence in their homes.

Given the physical and psychological consequences of domestic violence, any barriers preventing women and children from leaving a violent home situation need to be addressed. Several of the aforementioned studies focused directly on this issue by asking women if they delayed leaving their violent homes because of concern for their pet's welfare. Results have revealed that 18% (Ascione, 1998), 19% (Flynn, 2000), 23% (Ascione et al., 2007), and 48% (Carlisle-Frank et al., 2004) of pet-owning women delayed leaving for this reason.

The network of domestic violence services in the Australian state of Victoria offers a unique research opportunity to access both urban and rural female victims of domestic violence who are based in the community (Victorian Community Council Against Violence, 2002). This network includes outreach (nonresidential) and refuge (residential) services that assist women in many situations such as those still living in abusive relationships, those whose partners have been removed from the home by court orders, those who are separated but under the same roof as their expartners and those who have left their violent homes. Thus, the population is more varied than populations sampled in the majority of previous studies.

In addition to reporting on a more heterogeneous sample than those of past research, several methodological issues identified in past research will be addressed in this study. First, pet ownership in the majority of previous studies has been arbitrarily restricted to within the 12 months prior to interview (Ascione, 1998; Ascione et al., 2007; Faver & Strand, 2003). The pet ownership selection criterion for women in the present study was that they owned at least one pet during their relationship. It did however, remain possible to analyze the data using Ascione's criterion and thus compare the results from the current study with those of previous research. Second, although no animal abuse studies have focused on adult male partners who are victims of intimate partner violence, women as perpetrators of partner abuse in lesbian relationships were investigated by Renzetti (1992). Pet abuse, perpetrated by

the respondent's partner, occurred in 38% of the violent lesbian relationships where pets were present in the home (Renzetti, 1992). Our study included female victims of both male-to-female and female-to-female intimate partner abuse. Finally, the animal abuse surveys in previous studies have been either self-administered or administered by shelter staff or a combination of both. In the present study, all surveys were administered by a single researcher, thereby potentially minimizing method error variance.

The primary aim of the present study was to compare the rates of animal abuse in a large, domestic violence sample, drawn from both rural and urban outreach and refuge services, with a nondomestic violence group drawn from the community. Secondary aims of this study were to determine the percentage of women in crisis accommodation who had delayed leaving their violent home because of concern for their pet's welfare, and to examine qualitative data on the types of pet abuse committed by partners.

It was hypothesized that:

- the reported rates of partner pet abuse, partner threats of pet abuse, and pet abuse committed by other family members would be significantly higher in the domestic violence group as compared with the nondomestic violence group;
- children would be reported by their mothers to have witnessed partner pet abuse and partner threats of pet abuse at significantly higher rates in the domestic violence group as compared with the nondomestic violence group;
- children would be reported by their mothers to have committed pet abuse and threatened to commit pet abuse at significantly higher rates in the domestic violence group as compared with the nondomestic violence group;
- 4. women whose partners had abused or threatened the pets would be more likely to belong to the intimate partner violence group.

Method

Participants

Two groups of participants were recruited: a domestic violence group, recruited through domestic violence support agencies, and a nondomestic violence control group recruited from the Victorian community.

Inclusion criteria for participants in the domestic violence group were that, at the time of recruitment, participants had to: (a) be accessing a domestic violence support agency (e.g., refuge or outreach service), (b) own at least one pet during their current relationship (or during their most recent relationship if currently single), and (c) that this relationship include domestic violence. To eliminate the possibility that participants in this group were in a recent nonviolent

relationship, it was firstly established that the relationship discussed in the interview included domestic violence.

The domestic violence sample comprised 102 women, ranging in age from 23 to 66 years (M = 38.50, SD = 9.48), recruited from 24 Victorian domestic violence outreach and refuge services (see procedure for recruitment description). The average number of children for the group as a whole was 2.55 (SD = 1.29). The mean highest education level was 6.44 (SD = 2.56) determined from: $1 = finished\ primary\ school$, $2 = finished\ Year\ 7$, $3 = finished\ Year\ 8$, $4 = finished\ Year\ 9$, $5 = finished\ Year\ 10$, $6 = finished\ Year\ 11$, $7 = finished\ Year\ 12$, $8 = vocational\ training$, $9 = completed\ Technical\ and\ Further\ Education\ (TAFE)\ course$, $10 = completed\ undergraduate\ degree/diploma$, $11 = completed\ postgraduate\ degree/diploma$. The reported relationship status of women in the domestic violence group was as follows: married: 5.9%; separated: 50%; divorced: 8.8%; partnered: 0%: de facto: 5.9%; single: 27.4%; widowed: 0%; other: 2%. At the time of interview, 33% were living in a refuge, transitional housing, or some other type of crisis accommodation. The remaining 67% were not living in any form of crisis accommodation.

The second group of participants was recruited from the community. Inclusion criteria for participants in this group were that participants must have owned at least one pet during their current, or if single, during their most recent relationship, and this relationship did not either currently, or in the past, include domestic violence. The domestic violence definition on the informed consent statement was used to screen out prospective participants whose relationships had included domestic violence.

The nondomestic violence sample comprised 102 women ranging in age from 18 to 74 years (M = 42.06, SD = 13.25). A total of 58 women (57%) was recruited from eight Neighbourhood Houses in the state of Victoria, with the remaining 44 participants (43%) comprising a convenience sample recruited from a variety of Victorian workplaces and leisure and recreational groups. The average number of children for the sample was 1.81 (SD = 1.27) and the mean highest education level was 8.42 (SD = 2.09). The reported relationship status of women in this group was as follows: married: 72.6%; separated: 0%; divorced: 0%; partnered: 13.7%; de facto: 8.8%; single: 2.9%; widowed: 2%; other: 0%.

Measures

A telephone interview was conducted with each participant. Basic demographic data on age, relationship status, number of children, and education level were collected. The survey included questions relating to acts of animal abuse (partner/child/other family member), threatening to commit animal abuse (partner/child), witnessing acts of animal abuse (child), and witnessing threats to commit animal abuse (child; see interview schedule items in the appendix).

Responses to each question were coded with reference to animal abuse defined as "socially unacceptable behaviour that intentionally causes unnecessary pain, suffering, or distress to and/or death of an animal" (Ascione, 1993, p. 228). Also, in accordance with Ascione's (1993) definition of animal abuse, a conservative approach to coding was adopted. Consequently, only intentional physical acts causing pain or death were coded as animal abuse. Excluded were acts of euthanasia, accidents, and acts of neglect. Acts of neglect were excluded because of the fact that intent was judged by an observer, the woman. Additionally, behavior by children aged 2 years and under was excluded, with the vast majority of mothers commenting that their child was engaging in unintentional rough play. Children were only considered to have witnessed animal abuse if this behavior had been coded as animal abuse. For example, incidents of children witnessing accidents were not included in calculations of abuse.

Procedure

Following the approval of the Monash University Standing Committee on Ethics in Research Involving Humans, service participation was requested via an explanatory statement and consent form distributed to the coordinator of each domestic violence service. A total of 47 eligible services were contacted; 40 services (85%) consented to participate in the study and 24 services (51%) provided at least one participant. Following receipt of consent, each consenting service was sent a pack of informed consent statements for prospective participants.

Participants for the domestic violence group were recruited via two methods: posters were displayed at the service and, when appropriate, domestic violence workers highlighted the existence of the study and offered interested women an informed consent statement. It was made clear that participation was voluntary and that service delivery was not dependent on participation. It was emphasized, both in the informed consent statement and again before the interview, that all identifiable information received from participants would remain confidential.

In all but two cases the women interviewed for the domestic violence group were victims of intimate partner abuse. The perpetrators in the two exceptions were an adult son and a cotenant. These two cases were not analyzed for this study, taking the total from 104 to 102 participants in the domestic violence group.

Telephone interviews were arranged at the convenience of the participants and were usually coordinated by the participant's domestic violence support worker. Interviews involving acts of animal abuse required 30 to 50 min. Interviews involving no animal abuse lasted between 5 and 15 min. All telephone interviews, for both the domestic violence group and the nondomestic violence group, were conducted by the first author in a private setting. No accurate survey return rate could be calculated because of the unavoidable involvement, for security reasons, of secondary parties in the recruitment process.

Consent to recruit participants for the nondomestic violence group was obtained from the managers of 12 Neighbourhood Houses in Victoria. A total of 8 houses provided at least one participant. Recruitment methods used were displaying posters, presentations by the first author to groups of women taking a variety of classes at the houses, and informed consent statements distributed to prospective participants by Neighbourhood House staff. Additionally, informed consent statements were distributed to women at a variety of Victorian workplaces and leisure and recreational groups. A definition of domestic violence was provided on the informed consent statement and was read again to each participant prior to the interview to assist in screening participants.³

Telephone interviews for women in the nondomestic violence group were arranged immediately, or following the return of their contact details in a reply paid envelope at a time that was convenient for the participants. Interviews for this group lasted on average between 5 and 15 min.

Results

Demographics

Chi-square analyses of the demographic data for the two groups revealed a significant difference in relationship status, $\chi^2(4, N = 204) = 150.26$, p < .01. Results of post hoc analyses showed a significantly higher proportion of women in the nondomestic violence group were currently in a relationship, $\chi^2(1, N = 204) = 139.01$, p < .01, as compared with the domestic violence group.

Independent-samples *t* tests were conducted on (1) number of children, (2) women's age, and (3) highest education level. Results revealed that women in

the domestic violence group (M = 2.55, SD = 1.29) had, on average, a significantly greater number of children as compared with the nondomestic violence group women (M = 1.81, SD = 1.27), t(202) = -4.10, p < .01. The nondomestic violence group had a significantly higher mean age (M = 42.06, SD = 13.25) than the domestic violence group (M = 38.50, SD = 9.48), t(202) = 2.21, p < .05. Women in the nondomestic violence group (M = 8.42, SD = 2.09) also had a significantly higher level of education (M = 6.44, SD = 2.56), t(202) = 6.06, p < .01.

Pet Ownership

The most commonly owned types of pets for both the domestic violence sample and the nondomestic violence sample were dogs and cats. For the domestic violence group, 53% of families had at least one dog and 40% had at least one cat. A total of 58% of families in the nondomestic violence sample had at least one dog and 49% of families had at least one cat.

Pet Abuse

The reported rate of partner pet abuse in the domestic violence group was 52.9% (54 of 102) and 0% (0 of 102) in the nondomestic violence group, $\chi^2(1, N=204)=70.75$, p<.01. Partner threats of pet abuse were reported by 46% (47 of 102) of the domestic violence group and 5.8% (6 of 102) of the nondomestic violence group, $\chi^2(1, N=204)=40.79$, p<.01. Pet abuse committed by other family members (excluding children) was reported by 12.7% (13 of 102) of the domestic violence group and 3.9% (4 of 102) of the nondomestic violence group, $\chi^2(1, N=204)=4.11$, p<.05]. As reported above, in all instances, group differences were statistically significant.

Qualitative Analyses: Partner Pet Abuse

The types of pet abuse committed by partners in the domestic violence group were collated and the most frequently occurring behaviors, across households, are presented in Table 1. Each number in the table represents the number of households where the particular behavior occurred at least once.

As shown in Table 1, kicking was the most prevalent form of pet abuse committed by partners in the domestic violence group, occurring in 32% (33 of 102) of the total number of households in the group and 61% (33 of 54) of the number of households that included partner pet abuse.

Table 1

Types of Pet Abuse Committed by Partners in the Domestic Violence Group (n = 102)

Act of Abuse	No. of Surveyed Households Where Act Occurred at Least Once				
Kicked	33				
Punched or hit	15				
Threw pet	10				
Hit with object	5				
Swung/thrown by tail	3				
Beheaded/broke neck	3				
Choked/strangled/suffocated	3				
Hung/held in air with lead	3				
Shot	2				
Jabbed/stabbed	2				

Children and Pet Abuse

Women who had at least one child with them during the relationship in question (i.e., 93 domestic violence group women; 77 nondomestic violence group women) were asked four additional questions. A total of 29% (27 of 93) of mothers in the domestic violence group and no mothers in the nondomestic violence group (0 of 77) reported that their children witnessed their partner abusing the pets, $\chi^2(1, N = 170) = 24.45$, p < .01. Twenty-nine percent (27 of 93) of mothers in the domestic violence group and 1% (1 of 77) of mothers in the nondomestic violence group reported that their children had witnessed their partner threatening the pets, $\chi^2(1, N = 170) =$ 21.58, p < .01. Children committing actual pet abuse was reported by 19% (18 of 93) of the domestic violence mothers and 1% (1 of 77) of the nondomestic violence group mothers, $\chi^2(1, N=170) = 12.08$, p < .01; however, the result of a Fisher's Exact Test (.22)—calculated because two cells (50%) had expected count less than five—revealed no significant difference between the number of mothers' reports of children threatening to commit pet abuse in the domestic violence group (5%, 5of 93) and the nondomestic violence group (1%, 1 of 77).⁵

Logistic Regression

A direct logistic regression analysis was performed with group membership (domestic violence or nondomestic violence) as the dependent variable

of Demographics and Partner Pet Threat										
							95% Confidence Interval			
Variable	В	SE	Wald	df	p value	Odds Ratio	Lower	Upper		
Age	014	.037	.138	1	.711	.986	.918	1.060		
Number of children	.821	.298	7.574	1	.006	2.273	1.267	4.080		
Education level	.039	.169	.053	1	.817	1.040	.747	1.447		
Relationship status			22.735	7	.002					
Partner threats of pet abuse	1.631	.811	4.039	1	.044	5.107	1.041	25.050		
Constant	-4.372	2.414	3.280	1	.070	.013				

Table 2
Logistic Regression Analysis of Group as a Function of Demographics and Partner Pet Threat

and age (continuous), number of children (continuous), highest education level (continuous), relationship status (categorical) and partner threats of pet abuse (categorical) as predictor variables. A total of 204 cases were analyzed and the full model, including all five predictors, was statistically significant, $\chi^2(11, N=204)=213.01, p<.001$. The model accounted for between 64.8% (Cox & Snell *R*-squared) and 86.4% (Nagelkerke *R*-squared) of variance in group membership. Predictive accuracy of the model was notable with 92.2% of the domestic violence group and 96.1% of the nondomestic violence group women correctly predicted, giving an overall accuracy of 94.1%.

The regression coefficients, standard errors and Wald statistics (including degrees of freedom and probability values), and odds ratios (including confidence intervals) for each of the five predictor variables are presented in Table 2.

As shown in Table 2, partner threats of pet abuse was a reliable predictor of group membership. Of the four demographic variables used as predictors in the model, only number of children and relationship status were reliable predictors. The odds ratio for the nondemographic question of interest, partner threats, was 5.107. That is, the odds of a woman being in the domestic violence group is 5 times higher for a woman whose partner threatened the pets than for a woman whose partner has not threatened the pets.

Delaying Leaving Abusive Relationship

The final question on the survey "Did concern over your pet's welfare keep you from coming to this refuge (crisis accommodation/transitional housing)

sooner than now?" was directed only to women in the domestic violence group who were residing in some form of emergency accommodation. Thirty-four women were currently residing either in a refuge, transitional housing, or some other form of crisis accommodation at the time of interview. One woman was not asked this question because she was in crisis accommodation because of abuse issues of an historical nature. Each of the remaining 33 women was asked if she delayed leaving, and if the response was affirmative, she was then asked to quantify the time of delay.

A total of 33.3% of women (11 of 33), each living in some form of crisis accommodation at the time of interview, reported that they had delayed leaving their violent relationship because of concern for their pet's welfare. Of the 11 women who delayed leaving, one delayed 1 week, one delayed 3 to 4 weeks, seven delayed more than 8 weeks, and two delayed leaving but couldn't quantify the time.

Discussion

The primary purpose of this study was to compare the rates of pet abuse in a domestic violence and nondomestic violence group. The hypothesis that the reported rates of partner pet abuse, partner threats of pet abuse and other family member pet abuse would be significantly higher in the domestic violence group was supported. More mothers in the domestic violence group reported that their children had witnessed their partners abusing and threatening to abuse the family pets, as predicted. The hypothesis that children would commit and threaten to commit pet abuse at higher rates in the domestic violence group was only partially supported. Specifically, more mothers in the domestic violence group reported that their children had committed actual pet abuse; however, no difference was found between the two groups in terms of threatening behavior toward pets by children. A total of 33% of women in crisis accommodation reported that they delayed leaving their violent relationship because of concern for their pet's welfare. Finally, a woman whose partner had threatened to abuse the pets was 5 times more likely to belong to the domestic violence group than a woman whose partner had not threatened to abuse the pets.

Consistent with the findings of Ascione et al. (2007), the current study found significantly higher rates of reported partner pet abuse and partner threats of pet abuse in the domestic violence group as compared with the nondomestic violence group. The consistency with past research was found for both the complete set of data for the current study, which included

women who owned a pet during their relationship, and for the reanalyzed data set, including only women who owned a pet at the time or during the previous 12 months (cf. Ascione et al.'s pet ownership selection criterion). No direct comparisons between the findings of the current study and Ascione et al.'s study on the child-related questions were possible because of the different selection methods employed in each study. Specifically, mothers in Ascione et al.'s study answered questions in relation to only one of their children, whom they had selected, and additional questions on their other children, whereas women in the current study were asked to report on all their children in every question.

Although the research conducted by Ascione et al. (2007) was the only previous study to include a comparison group, the findings of the four studies that surveyed only women who had experienced intimate partner violence (Ascione, 1998; Carlisle-Frank et al., 2004; Faver & Strand, 2003; Flynn, 2000) can be compared with the domestic violence results for both the current study and Ascione et al.'s (2007) study.

On the whole, research has shown that approximately 50% of women in violent relationships report that their violent partner had hurt or killed one of their pets (i.e., 46% in Faver & Strand, 2003; 52.9% in the current study; 53% in Carlisle-Frank et al., 2004; 54% in Ascione et al., 2007; 57% in Ascione, 1998). Somewhat divergently, Flynn (2000) reported a comparatively lower figure of 26%.

Women reported that their violent partner had threatened to hurt or kill one of their pets in a relatively small rate range, 40% to 53%, across studies. Specifically, reported rates of partner threats of pet abuse were: 40% (Flynn, 2000), 46% for the current study, 48.8% (Faver & Strand, 2003) and 53% (Ascione et al., 2007).

The current study found that 12.7% of women reported that another family member had hurt or killed one of their pets. Unlike the partner pet abuse questions, this question was not restricted to the time period the woman was with the violent partner. For example, many women reported that members of their family of origin had abused the family pets. Given the link between animal abuse and domestic violence established by the current and previous research, this finding may indicate that some women are caught in a cycle of violence, possibly raised in households that include both human- and animal-directed violence, a pattern repeated in their adult lives.

Regarding the four questions asked of women who had at least one child with them during their relationship, more mothers in the domestic violence group reported their children had witnessed actual pet abuse, witnessed threats of pet abuse, and committed pet abuse. However, children in the domestic violence group were no more likely to threaten the pets than children in the nondomestic violence group. A possible explanation for the lack of difference for child threats of animal abuse between the two groups is the sole reliance on mothers' accounts of their children's behavior. Accounts from other observers, possibly appropriately aged siblings or a self-report, may have provided a more complete picture of all the child's expressed behaviors.

Two previous studies (Ascione, 1998; Flynn, 2000) included questions on children's behavior toward pets for the domestic violence group only, allowing for partial comparison with the findings of the current study. The rates of reported pet abuse by children varied considerably across studies. Specifically, reported rates were: 7% (Flynn, 2000), 19% for the current study, and 32% (Ascione, 1998). The marked variability in findings may be due to the small numbers of women surveyed in the two previous studies. Ascione (1998) surveyed 28 women, 22 of whom had children. Of the 43 women with pets surveyed by Flynn (2000), only 15 had children. In contrast, of the 102 pet-owning women surveyed in the current study, a total of 93 women had at least one child with them during their violent relationship.

In addition, the present study found that 5% of mothers in the domestic violence group reported that at least one of their children had threatened pet abuse, a comparable figure to the 7% reported by Flynn (2000), the only previous study to include a question on children's threats to abuse pets.

Carlisle-Frank et al. (2004) found that 61% of women reported that their children had witnessed their partner abusing the pets. The current study found that 29% of mothers in the domestic violence group reported that their children witnessed partner pet abuse. The two figures are, however, not comparable because Carlisle-Frank et al. based their figure on a smaller subpopulation of only families where pet abuse had occurred, thus inflating the figure. These types of calculations based on smaller subpopulations may compound the errors already present, given that only the mother was interviewed and she may not be aware of all the pet abuse perpetrated by her partner or whether her children witnessed this abuse.

Finally, the percentage of women currently in crisis accommodation who had delayed leaving their violent relationship because of concern for their pet's welfare was found to be 33%. This rate is within the range of previous reports and comparable with the 18% reported by Ascione (1998), 19% reported by Flynn (2000), 23% reported by Ascione et al. (2007), and 48% reported by Carlisle-Frank et al. (2004).

Clinical and Practical Implications

The present study has established the link between animal abuse and domestic violence in an Australian sample. This co-occurrence, in adulthood, of animal abuse and interpersonal violence has important clinical implications. The most recent edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR*; American Psychiatric Association, 2000) does not include animal abuse as a criterion of any disorder typically used to diagnose violent adults (e.g. antisocial personality disorder); however, animal abuse is a diagnostic criterion of conduct disorder, typically used to diagnose aggressive children and adolescents. The present study adds to the growing body of evidence suggesting that children may not just "graduate up" from animal abuse to interpersonal violence, but instead, human and animal directed violence may be linked throughout the lifespan. Indeed, research showing a relationship between bullying behavior and animal cruelty in childhood supports such a proposal (Baldry, 2005).

In addition, the alarmingly high rates of children from violent families committing and witnessing pet abuse found in the present study highlights the need for early clinical interventions by professionals. Although the developmental trajectory of behaviors involving animal- and human-directed violence has yet to be mapped by prospective studies, it is nevertheless apparent that children committing and witnessing animal abuse and living in violent homes are at increased risk of developing behavioral and psychological problems.

The present study found that one third of women in crisis accommodation reported they delayed leaving their violent relationship because of concern for their pet's welfare. An important practical application of these findings would be the development and implementation of a nationwide strategy allowing the simultaneous removal of a woman, her children, and pets from their violent home.

Limitations and Future Directions

A limitation of the current research relates to the differences in demographics between the domestic violence and nondomestic violence groups. Similarly, Walton-Moss et al. (2005) found differences between the demographics of their abused and nonabused groups. Our analyses revealed, however, that one specific characteristic, partner threats of pet abuse, was able to significantly predict group membership over and above the demographic variables. This finding has important applications for screening questionnaires

given to women accessing domestic violence services. Given that partner "threats of pet abuse" alone predicted group membership—that is, whether a woman belongs to the intimate partner violence group—then, at a minimum, screening questionnaires should include a question enquiring if the abusive partner has threatened to hurt or kill the pets.

An important future direction of research would be to determine the underlying causes of human- and animal-directed violence. The detailed, often horrific, accounts of the animal abuse witnessed by women interviewed for this study were not presented for reasons of security, to protect the identities of the participants. A worthy goal of future research would be to focus on the characteristics of the perpetrators of domestic violence to determine whether animal abuse is an undifferentiated act of aggression or a grossly inappropriate instrumental act designed to terrify and control those living with the perpetrator.

Conclusion

In conclusion, the present findings add to the growing body of evidence linking animal abuse and domestic violence. In addition, this study extended previous research, finding more children reported as witnessing and committing animal abuse in the domestic violence group. To further understand the developmental course of behavior patterns that include violence toward humans and animals, prospective studies are required. The focus of these studies needs to be on determining the underlying causes of violence, to delineate, and differentiate if necessary, the causes of human-directed violence and animal-directed violence. Prospective studies of animal abusers, following children with this first troubling behavioral marker through to adulthood, would enhance our understanding of the nature of violence, and allow for the development of well-targeted, early-prevention programs. It is hoped that increased awareness of the human violence-animal abuse link in adulthood will alert allied professionals such as police, child-protection specialists, veterinarians, counselors, and animal welfare investigators to the multiple victims of domestic violence.

Appendix Animal Abuse Survey

Do you currently have a pet or other animal? If yes, what type and how many of each?

Have you had a pet animal or animals in the past 12 months?

Has your partner ever hurt or killed one of your pets? If yes, please describe. Has your partner ever threatened to hurt or kill one of your pets? If yes, please describe.

Have your children ever witnessed your partner hurt or kill one of your pets? If yes, please describe.

Have your children ever witnessed your partner threaten to hurt or kill one of your pets? If yes, please describe.

Have your children ever hurt or killed one of your pets? If yes, please describe. Have your children ever threatened to hurt or kill one of your pets? If yes, please describe.

Has any other member of your family ever hurt or killed one of your pets? If yes, please describe.

The following questions were directed only to the domestic violence group:

Are you currently living in a refuge, crisis accommodation, or in transitional housing? If yes then the following question was asked:

Did concern over your pet's welfare keep you from coming to this refuge (crisis accommodation/transitional housing) sooner than now? If yes, for how long did you delay leaving?

Notes

- 1. The average duration of support in a refuge in the state of Victoria is 6 weeks.
- 2. Neighbourhood Houses are based in the community and run low cost social, educational, and recreational programs.
- 3. Domestic violence has been defined as "violent, threatening, coercive or controlling behaviour that occurs in current or past family, domestic or intimate relationships. This encompasses not only physical injury but direct or indirect threats, sexual assault, emotional and psychological torment, economic control, property damage, social isolation and behaviour which causes a person to live in fear" (Office of Women's Policy, 2001, p. 21).
- 4. Several studies also include a further breakdown of the pet abuse and threats of abuse statistics for the domestic violence group as follows: a total of 18.6% of women (19) in the domestic violence group reported partner pet abuse only, 11.8% (12) reported partner threats of abuse only, and 34.3% (35) reported both threats of pet abuse and actual pet abuse by their partner. Thirty six women (35.3%) reported neither actual partner pet abuse nor threats of pet abuse.
- 5. The results of the complete survey were recalculated using only women who owned a pet currently or in the previous 12 months—Ascione et al.'s (2007) pet selection criteria. The results for analyses of these data showed the same pattern of significant results as those for the full data set and are not reported here.
- 6. Partner pet abuse was not used as a predictor variable in the model because of the issue of partial separation. That is, there were no cases of actual pet abuse in the nondomestic violence group.
- 7. Only women in crisis accommodation were asked this question. The circumstances of the women not living in crisis accommodation—including both separated women and those still with their partner—were not explored to avoid overquestioning or implying, because of the nature of the delaying-leaving question, that the women should leave.

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