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Vicious Dogs: The Antisocial Behaviors and Psychological Characteristics of Owners

ABSTRACT: Each year, 4.7 million people are bitten by dogs. Of those bitten each year, 386,000 are seriously injured and some killed. Consequently, many insurance companies refuse to issue homeowners insurance to owners of specific breeds of dogs considered "vicious" or high risk of causing injury. This study examined whether vicious dog owners were different on antisocial behaviors and personality dimensions. A total of 869 college students completed an anonymous online questionnaire assessing type of dog owned, criminal behaviors, attitudes towards animal abuse, psychopathy, and personality. The sample was divided into four groups: vicious dog owners, large dog owners, small dog owners, and controls. Findings revealed vicious dog owners reported significantly more criminal behaviors than other dog owners. Vicious dog owners were higher in sensation seeking and primary psychopathy. Study results suggest that vicious dog ownership may be a simple marker of broader social deviance.

KEYWORDS: forensic science, vicious dogs, antisocial behaviors, psychopathy

In 2001, Diane Whipple was tragically maimed and killed by two 120-pound Presa Canario dogs in her own apartment complex. The two owners, both attorneys, were convicted of involuntary manslaughter and keeping a mischievous animal that killed a human being. Both dogs were euthanized and the owners were each sentenced to 4 years in prison (1).

Each year, 4.7 million people are bitten by dogs. Of those bitten each year, 386,000 are seriously injured (2,3). In fact, between the years of 1979 and 1998, 238 people died from dog-bite related injuries in the U.S.A. (4). Injuries caused by dogs cost insurance companies nearly one billion dollars annually (2,3). Consequently, many insurance companies refuse to issue homeowners insurance to owners of specific breeds of dogs considered "vicious" or high risk of causing injury. The six breeds most commonly identified as "vicious" are Akita, Chow ("Chow Chow"), Doberman, Pit Bull, Rottweiler, and Wolf-mix (5). The American Kennel Club, which is a nationally recognized organization for the registry of purebred dogs, argues that "it is not the dog *breed* but the dog *deed*" that creates risk to others; nevertheless, certain dog breeds are associated with heightened injury to humans (5).

There are over 60 million dogs in the U.S.A., but there is little research on which people choose to own "vicious" dogs, and why (2). In 2006, Barnes et al. (6) published a comparison of owners of "vicious" dogs to other dog owners by examining the owner's illegal behaviors. For their study, data on criminal convictions in the following categories of illegal behavior were collected from the Hamilton County Clerk of Courts in Ohio: aggression, alcohol, drug use, domestic violence, crimes including children, and crimes including firearms. A total of 166 owners of vicious dogs were compared with 189 owners of low risk dogs, showing that vicious dog owners had nearly 10 times more criminal convictions than other dog owners. When looking at the different categories of criminal convictions, vicious dog owners were 6.8 times more likely to be convicted of an aggressive crime, 2.8 times more likely to have carried out a crime involving children, 2.4 times more likely to have

perpetrated domestic violence, and 5.4 times more likely to have an alcohol conviction when compared to low risk dog owners.

The authors proposed a general social deviance theory of criminal behavior to explain this finding. Specifically, this theory asserts that individuals do not usually exhibit just one type of criminal behavior (e.g., drug trafficking) but instead exhibit multiple criminal behaviors (e.g., animal fighting and robbery). Barnes et al. (6) hypothesized that owning a vicious dog (that has the potential to seriously injure or kill someone) could further represent deviant behavior by individuals that already exhibit other types of criminal conduct (6). They suggest that some individuals may find it appealing to own dogs considered to be "vicious." Further, the decision to own a vicious dog may reflect significant psychological characteristics of owners.

A literature review of Psych Info, Medline, and Sage Criminology revealed no other research looking at the characteristics of individuals that own vicious dogs.

Research suggests psychopathy is predictive of a greater propensity to commit multiple criminal acts. Moreover, psychopaths begin committing violence early in their lifetime and continue perpetrating acts of violence late into adulthood. Psychopaths have an increased risk of recidivating compared to other offenders (7). Psychopaths exhibit distinctive characteristics, which include antisocial behaviors (e.g., need for stimulation, impulsivity, and lack of responsibility) and interpersonal deficits (e.g., lack of empathy, grandiosity, and manipulative). Research suggests these unique psychopathic characteristics could contribute to a predisposition to perpetrate criminal acts (7). Could individuals that choose to own vicious dogs also exhibit psychopathic characteristics?

Only one study has examined the characteristics of vicious dog owners. Therefore, the present study was conducted to expand the previous research. Based on Barnes et al. (6), we hypothesized that vicious dog owners would display a greater number of antisocial, criminal behaviors compared with all other dog owners. We also explored whether vicious dog owners would differ on various psychological dimensions. We hypothesized that the owners of vicious dogs would be significantly higher on measures of sensation seeking, aggression, psychopathy, and attitudes towards tolerance of animal abuse.

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TABLE 1—Descriptive data for the different dog and owner types.

	Vicious Dog	Large Dog	Small Dog	Control
Dog sex <i>n</i> (%)				
Male	45 (68.18)	151 (49.83)	84 (43.30)	
Female	21 (31.82)	152 (50.17)	110 (57.70)	
Dog weight mean (SD)	68.92 (29.19)	75.91 (29.23)	19.29 (10.01)	
Owner sex <i>n</i> (%)				
Male	21 (31.82)	90 (29.70)	30 (15.46)	47 (25.97)
Female	45 (68.18)	213 (70.30)	164 (84.54)	134 (74.03)
Owner age mean (SD)				
Male	21.62 (6.05)	19.97 (2.29)	19.77 (1.01)	19.83 (1.36)
Female	19.69 (2.96)	19.87 (3.85)	19.39 (2.25)	20.14 (2.60)

Control, individuals that did not own a dog.

Method

Participants

The original sample was 869 undergraduates from a large eastern university. The infrequency validity scale on the Zuckerman-Kuhlman Personality Questionnaire (8) was used to eliminate participants who did not carefully read the survey questions. A total of 758 (87.2%) participants responded in a valid manner and were included in subsequent analyses. In the final sample, 193 (25.5%) men and 565 (74.5%) women participated. The mean age of the sample was 19.85 (SD = 2.97) and the majority were Caucasian ($n = 697$, 92.0%).

A total of 66 (8.9%) were owners of vicious dogs. The breeds of vicious dogs owned by participants in the sample included: Chow-Chows ($n = 22$, 33.3%), Pit Bulls ($n = 18$, 27.3%), Rottweilers ($n = 12$, 18.2%), Wolf-hybrids ($n = 7$, 10.6%), Akitas ($n = 3$, 4.5%), and Dobermans ($n = 4$, 6.1%). Some names participants gave their vicious dogs were Bear, Dude, Fatboy, and Harley. The remainder of the participants were classified into large dog owners ($n = 303$, 40.0%), small dog owners ($n = 194$, 25.6%), or controls (not a dog owner) ($n = 181$, 23.9%). Common names for large dogs were Bailey, Duke, Molly, and Max. Frequent names given to small dogs included Ewok, Gizmo, Trixie, and Yogi. Table 1 displays demographic information describing the dogs and owners.

Materials

Demographic Questionnaire—Participants gave standard demographic information on an Internet survey. Questions assessed variables such as sex, age, and ethnicity.

Dog Ownership Questionnaire—On an Internet survey, participants described up to three of their dogs. They were asked to describe first their largest dog, then their second largest, and last their third largest dog. Information gathered about each dog included: breed, age, sex, whether the dog was fixed (neuter/spayed), name, weight, and from whom or where they had received their dog.

For analyses, participants were categorized into four different ownership types. If a participant owned a vicious dog (i.e., Pit Bull, Akita, Chow, Rottweiler, Doberman, or Wolf-hybrid), they were classified in the vicious dog ownership category. If participants owned a dog 40 pounds or more and the dog was not a vicious breed, they were considered to be in the large dog ownership category. If a participant was not in the vicious dog or large dog ownership category, but owned a dog that was 39 pounds or less, the individual was classified in the small dog ownership category.

Lastly, those participants that did not own a dog were included in the control group ownership category.

Illegal Behavior Checklist—The Illegal Behavior Checklist (IBC) is a 22-item self-report questionnaire that identifies illegal activity. The IBC assesses four types of illegal activities: violent crimes against other people (e.g., “Have you ever been in a gang fight?”), property crimes (e.g., “Have you ever shoplifted something worth \$25 or more?”), drug crimes (e.g., “Have you ever sold marijuana?”), and status offenses (e.g., “Have you ever run away from home for more than a day?”). Participants respond by selecting “yes” if they previously participated in the illegal activity or “no” if they had not previously participated in the criminal activity. Total scores for the IBC scale were calculated by counting the number of questions in which the participant endorsed the behavior. Higher scores indicate a tendency to participate in a greater number of criminal behaviors. The IBC scale was also used to categorize individuals into offender types. Individuals were classified into a criminal category by their most severe act. The order of severity of acts from most to least severe include: violent, property, drug, status, or no criminal behavior (9).

Zuckerman-Kuhlman Personality Questionnaire—The Zuckerman-Kuhlman Personality Questionnaire (ZKPQ) is a 99-item questionnaire which measures five personality dimensions: impulsive sensation seeking, neuroticism-anxiety, aggression-hostility, activity, and sociability. Participants respond with “true” if they believe an item describes them and respond with “false” if they do not believe an item describes them. Some items were reverse scored to help control for response tendencies. Total scores for each of the subscales were calculated by summing the number of true responses for each item on the separate subscales. Higher scores denote a more likely endorsement of the personality trait measured on the subscale (8).

The impulsive sensation seeking subscale includes 19 items that assess impulsiveness or tendency to act without planning and sensation seeking or a tendency to prefer unpredictable situations. Example items on the impulsive sensation seeking scale include “I often do things on impulse” and “I like doing things just for the thrill of it.” The neuroticism-anxiety subscale includes 19-items that assess worry, sensitivity to disapproval from others, and low self-confidence. Items on this subscale include “I am not very confident about myself or my abilities” and “I often feel restless for no apparent reason.” The aggression-hostility subscale is made up of 17 items that measure tendency to use verbal aggression, quickness to anger, and propensity to be antisocial. Items on the aggression-hostility subscale include “I enjoy seeing someone I don’t care for humiliated before other people” and “When I get mad, I say ugly things.” The activity subscale is composed of 17 items which measure need for activity, proneness to impatience, and preference for demanding work. Items on the activity subscale include “I do not like to waste time just sitting around and relaxing” and “I lead a busier life than most people.” The sociability subscale includes 17 items that assess preference for interacting with others and dislike for social isolation. Items on the sociability subscale include “I tend to start conversations at a party” and “I spend as much time with my friends as I can.” All five personality subscales demonstrated acceptable reliability for the study sample, with cronbach alpha coefficients ranging from 0.73 to 0.85 (8).

The ZKPQ also contains the infrequency scale, which is a 10-item subscale assessing validity of participant responses. Scores of three or greater on the infrequency scale are considered invalid and suggest possible inattentive or socially desirable responding. An

example item on the infrequency subscale includes “I never met a person I didn’t like” (8).

Levenson’s Self-Report of Psychopathy Scale—Levenson’s Self-Report of Psychopathy Scale (LSRP) is a 26-item self-report questionnaire that includes two subscales: primary and secondary psychopathy. All responses are based on a 4-point scale (1 = disagree strongly, 2 = disagree somewhat, 3 = agree somewhat, 4 = agree strongly), with some responses being reverse scored to help control for response tendencies. The primary psychopathy subscale measures carelessness, selfishness, and tendency to be manipulative. Example items on the primary psychopathy scale include “For me, what is right is whatever I get away with” and “I enjoy manipulating other people’s feelings.” The secondary psychopathy subscale assesses impulsiveness and tendency to exhibit self-defeating behaviors. Example questions on the secondary psychopathy scale include “I find myself in the same kinds of trouble, time after time” and “I don’t plan anything very far in advance.” Both the primary psychopathy ($\alpha = 0.86$) and secondary psychopathy ($\alpha = 0.70$) subscales demonstrated acceptable reliability with the study sample (10).

Attitudes Toward the Treatment of Animals Questionnaire—The Attitudes Toward the Treatment of Animals Questionnaire (ATTAQ) is a 27-item questionnaire which assesses tolerance of killing or harming animals. Responses are measured on a 5-point scale (1 = Not at all to 5 = A lot) with lower scores denoting a greater acceptance of violence or abuse of animals. Questions on the scale include “How much would it bother you to think about someone intentionally killing a domestic stock animal or wild animal for food?” and “How much would it bother you to think about someone intentionally encouraging or causing animals to fight one another (dog fight, cock fight, etc.)?” For this sample, the ATTAQ demonstrated acceptable reliability ($\alpha = 0.92$) (11).

Procedure

This study was IRB approved and administered online via a university sponsored website. The majority of the participants who completed this study received extra credit for their participation. To begin, participants read an informed consent describing the purpose, risks, benefits, and duration of the study. They were informed that the survey was anonymous. Participants then selected the “I agree” button if they wished to participate in the survey after reading the informed consent. Next, participants completed the demographic information and the dog ownership questionnaire. Participants completed the ZKPQ, ATTAQ, LSRP, and the IBC in a counterbalanced order. Lastly, participants were provided with a debriefing statement.

Results

Dog Sex and Dog Type

Table 1 includes the data demonstrating how many vicious, large, and small dogs were male and female. A Chi-square for Independence was performed to determine whether sex of the dog varied by type of dog. A significant dog type by dog sex difference was found, $\chi^2(3, n = 563) = 12.19, p = 0.002$. Results revealed that vicious dogs were more often male ($n = 45, 68.18\%$) when compared with large dogs ($n = 151, 49.83\%$) and small ($n = 84, 43.30\%$) dogs.

TABLE 2—Frequency and percentage of dog ownership type by category of illegal behavior.

Criminal Behavior Category	Vicious Dog	Large Dog	Small Dog	Control
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Violent	10 (15.2)	24 (7.9)	16 (8.2)	10 (5.5)
Property	19 (28.8)	65 (21.5)	26 (13.4)	40 (22.1)
Drug	16 (24.2)	64 (21.1)	47 (24.2)	45 (24.9)
Status	20 (30.3)	126 (41.6)	85 (43.8)	67 (37.0)
No criminal behavior	1 (1.5)	24 (7.9)	20 (10.4)	19 (10.5)
Total	66 (100)	303 (100)	194 (100)	181 (100)

Control, individuals that did not own a dog.

Participant Sex and Dog Ownership Type

Table 1 shows the number of male and female participants in the four dog ownership categories. A Chi-square for Independence was performed to determine whether dog ownership type varied by sex of the participant. A significant dog ownership type by participant sex difference was found, $\chi^2(3, n = 744) = 14.58, p = 0.002$. Female participants were more likely to own small dogs ($n = 164, 84.84\%$) when compared with large ($n = 213, 70.30\%$) and vicious ($n = 45, 68.18\%$) dogs.

Criminal Behavioral Characteristics of Dog Ownership Types

Table 2 illustrates the frequency and percentage of individuals in each of the dog ownership groups and criminal behavior categories. A Chi-square for Independence was conducted to determine if dog ownership type varied by criminal behavior type. As predicted, a significant dog ownership type by criminal behavior type difference was found, $\chi^2(12, n = 744) = 22.17, p = 0.036$. Findings demonstrated more vicious dog owners were classified in the violent criminal behavior category ($n = 10, 15.2\%$) when compared with large dog owners ($n = 24, 7.9\%$), small dog owners ($n = 16, 8.2\%$), and controls ($n = 10, 5.5\%$). Also, fewer vicious dog owners were classified in the no criminal behavior category ($n = 1, 1.5\%$) when compared with large dog owners ($n = 24, 7.9\%$), small dog owners ($n = 20, 10.3\%$), and controls ($n = 64, 8.6\%$).

To determine if individuals who owned vicious dogs participated in a greater variety of criminal behaviors when compared to all other dog ownership categories, a four-group (dog ownership type: vicious dog vs. large dog vs. small dog vs. control) ANOVA was conducted with the number of criminal behaviors endorsed on the IBC as the dependent measure. To control for unequal cell sizes, Unique Sums of Squares IV was used for this analysis and all subsequent analyses. Findings demonstrated a significant main effect for dog category type, $F(3, 740) = 5.83, p < 0.001$. Table 3 demonstrates the results of the ANOVA. Findings show that vicious dog owners participate in a greater variety of criminal behaviors when compared with all other types of owners, as expected.

Psychological Characteristics of Dog Ownership Types

To determine if vicious dog owners differed on personality characteristics when compared to all other dog ownership categories, a four-group (dog ownership type: vicious dog vs. large dog vs. small dog vs. control) MANOVA was conducted with dependent variables as the five personality scales measured on the ZKPQ (impulsive sensation seeking, neuroticism-anxiety, aggression-hostility, activity, and sociability). Analyses showed a main effect for dog ownership type, $F(3, 740) = 3.44, p < 0.001$. Results of the

TABLE 3—Number of different criminal offenses committed for each of the dog ownership type categories.

	Vicious Dog		Large Dog		Small Dog		Control		F	p
	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Criminal behavior	4.23 ^{a,b,c}	3.31	3.02 ^a	2.59	2.60 ^b	2.40	3.11 ^c	3.06	5.83	0.01

Means with the same letter in the same row are statistically significantly different from each other at $p < 0.05$. Pairwise comparisons were utilized to look for significant differences between the means. Control, individuals that did not own a dog.

TABLE 4—Mean scores on the Zuckerman-Kuhlman Personality Questionnaire subscales as a function of dog ownership type.

Personality Subscales	Vicious Dog		Large Dog		Small Dog		Control		F	p
	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Impulsive/sensation seeking	10.29 ^a	4.10	9.66 ^b	4.22	9.29	4.34	8.48 ^{a,b}	4.51	4.05	0.007
Neuroticism/anxiety	8.98	4.81	8.14 ^a	4.55	9.34 ^a	4.80	8.35	4.68	2.92	0.033
Aggression/hostility	7.48	3.71	7.03	3.73	6.74	4.06	7.23	3.24	0.88	0.447
Activity	8.11	3.60	8.27 ^{a,b}	3.57	7.35 ^a	3.15	7.21 ^b	3.46	4.87	0.002
Sociability	9.44	3.95	10.42 ^a	3.80	10.40 ^b	3.54	9.34 ^{a,b}	3.87	4.26	0.005

Means with the same letter in the same row are statistically significantly different from each other at $p < 0.05$. Pairwise comparisons were utilized to look for significant differences between the means. Control, individuals that did not own a dog.

univariate follow-up tests are displayed in Table 4. As predicted, findings demonstrate vicious dog owners were highest on sensation seeking; however, there were no significant differences found for aggression.

To evaluate whether vicious dog owners differed in a self-report measure of psychopathy when compared to all other dog ownership types, a four-group (dog ownership type: vicious dog vs. large dog vs. small dog vs. control) MANOVA was conducted with the LSRP subscales (primary and secondary psychopathy) as the dependent variables. Results demonstrated a main effect for dog ownership type, $F(3, 740) = 2.84$, $p < 0.009$. Results of the univariate follow-up tests are shown in Table 5. Results show that vicious dog owners had higher scores on primary psychopathy (e.g., carelessness, selfishness, and tendency to be manipulative) when compared to all other owner types, but not secondary psychopathy (e.g., impulsivity and tendency to exhibit self-defeating behaviors).

To determine if vicious dog owners differed in their attitudes towards violent or abusive behaviors of animals when compared to all other dog ownership categories, a four-group (dog ownership type: vicious dog vs. large dog vs. small dog vs. control) ANOVA was conducted with the ATTAQ total score as the dependent variable. Results in Table 5 illustrated a main effect for dog ownership type, $F(3, 740) = 5.45$, $p < 0.001$. Contrary to predictions, no significant differences were found for attitudes towards animal abuse for vicious dog owners. Findings show that small dog owners are least tolerant of animal abuse compared to the large dog owner group and control group.

Discussion

Each year, 4.7 million people are bitten by dogs, of which 386,000 are seriously injured and over 200 die. Several dog breeds have been labeled “vicious” or of “high-risk” for aggression. To date, only one empirical study has examined the characteristics of persons who choose to own their high-risk dogs (6). Barnes et al. reports that owners of Akitas, Chow-Chows, Dobermans, Pit Bulls, Rottweilers, and Wolf-mixes endorsed approximately 10 times more criminal convictions than owners of nonvicious dogs. Further, vicious dog owners reported more crimes involving aggression, children, alcohol, and domestic violence than owners of nonvicious dogs. The current research sought to replicate and extend these findings with a college sample. The present study compared non-dog owners and owners of vicious, large, and small dogs on engagement in criminal behavior, general personality traits (i.e., impulsive sensation seeking, neuroticism-anxiety, aggression-hostility, activity, and sociability), psychopathy, and attitude towards animal maltreatment.

Results indicate that the vicious dogs in the sample were more likely to be male (compared to large and small dogs) and female participants were more likely to own small dogs (compared to large and vicious dogs). As hypothesized, a significant difference in criminal behavior was found based on dog ownership type. Owners of vicious dogs were significantly more likely to admit to violent criminal behavior, compared to large dog owners, small dog owners, and controls. The vicious dog owner sample also engaged in more types (i.e., violent, property, drug, and

TABLE 5—Mean scores on Levenson's Self-Report Psychopathy subscales and the Attitudes Towards the Treatment of Animals Questionnaire as a function of dog ownership type.

	Vicious Dog		Large Dog		Small Dog		Control		F	p
	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Psychopathy subscales										
Primary psychopathy	30.50 ^a	6.85	29.98 ^b	7.64	27.64 ^{a,b,c}	6.97	30.10 ^c	8.23	5.06	0.002
Secondary psychopathy	21.86	4.55	20.98	4.14	20.38	4.67	21.14	4.59	2.12	0.096
Attitudes towards animal treatment	95.33	14.87	96.39 ^a	14.90	100.67 ^{a,b}	14.22	94.62 ^b	17.90	5.45	0.001

Means with the same letter in the same row are statistically significantly different from each other at $p < 0.05$. Pairwise comparisons were utilized to look for significant differences between the means. Control, individuals that did not own a dog.

status) of criminal behavior compared to all other participant groups.

Personality traits were examined and vicious dog owners were significantly higher than controls on impulsive sensation seeking. Examining psychopathic traits, owners of high-risk dogs endorsed significantly more characteristics of primary psychopathy (e.g., carelessness, selfishness, and manipulative tendencies) than small dog owners. Comparing owners of vicious dogs to other groups, no significant differences were found regarding secondary psychopathy (e.g., impulsiveness or self-defeating behaviors) or attitudes towards animal maltreatment.

Among the college sample, the vicious dogs were predominantly male and weighed 68 pounds. The owners had more self-reported overall criminal behaviors as well as violent criminal behavior. They endorsed significantly more sensation seeking and primary psychopathic traits. Several limitations of this study must be noted. This sample is composed of only college student dog owners, and therefore, the results most directly apply to them. The authors also attempted to recruit a community sample from the StudyReponse project via an Internet survey. Unfortunately, of the 1500 questionnaires distributed, just 262 responded and only 13 individuals were owners of vicious dogs. Therefore, we had an inadequate sample to replicate these findings.

Future research in this area would be strengthened by examining a sample of community dog owners of diverse educational, sex, and ethnic backgrounds. Validity of results would have also been enhanced with more detailed information regarding the dogs. For example, participants were not queried as to their certainty regarding the dog breed. Further, information regarding the dog's history of abuse, placement in a pound/humane society, and informal or formal training would add depth to data and related findings. Research could also explore whether owners of two or more vicious dogs differ from owners of one vicious dog on various psychological and behavioral attributes. This could not be explored in the current study because only 10 participants reported owning multiple vicious dogs.

Findings of this study generally support the results of Barnes et al. (6). With the abovementioned limitations, further research is needed to explore the results that owners of vicious dogs do differ from others in terms of antisocial behaviors and psychopathic traits. Future research could use criminal records, or interviews (direct or

collateral) to further examine antisocial and psychopathic attributes of vicious dog owners. This begins to clarify who chooses to own high-risk or vicious dogs. It also suggests that vicious dog ownership may be a simple marker of broader social deviance, which invites further research.

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