Personality Characteristics and Self-esteem in Pet Owners and Non-owners

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Previous research suggests that pet owners are psychologically different than non-owners in terms of self-esteem and other personality characteristics. In this study, 82 pet owners and 48 non-owners were tested on self-esteem, extraversion, neuroticism, and social self-esteem. Special emphasis was placed on highly attached pet owners compared with non-owners. Level of attachment was determined by scores from the CENSHARE pet attachment survey. No significant differences were found between the groups using analysis of variance and multivariate analysis of variance statistical procedures. It was concluded that pet owners and non-owners may not be different in terms of personality but may have become victims of stereotyping by both the general population and scientific researchers. Discussion was given to related significant findings and recommendations for further research.

Des recherches antérieures suggèrent que les propriétaires d'animaux domestiques sont psychologiquement différents des non-propriétaires pour ce qui est de l'estime de soi et de d'autres caractéristiques de la personnalité. Dans la présente étude, on a mesuré l'estime de soi, l'extraversion, le névrotisme, ainsi que l'estime sociale de soi chez 82 propriétaires et 48 non-propriétaires. Un accent spécial a été mis sur la comparaison entre les propriétaires d'animaux domestiques très attachés et les non-propriétaires. Le niveau d'attachement était déterminé au moyen du score obtenu à l'échelle CENSHARE d'attachement.
The human/companion-animal bond has been a source of intrigue for thousands of years. More recently, investigators have studied the benefits that people obtain by owning a pet or simply being in the presence of animals.

According to Beck and Katcher (1984), there are two kinds of publications on the subject of humans and companion animals: descriptive studies that are mostly case descriptions, and experimental studies, including formal research designs and hypothesis testing. Only a few studies have addressed the psychological features of the human-animal bond in a normal population sample of pet owners and non-owners.

From a broader perspective, research has focused on general benefits as well as benefits to self-esteem through pet ownership for various specific populations. Many of the results have been positive, whereas some have found limited or negative effects from pet ownership. It has been suggested that pet owners live longer (Friedmann, Katcher, Lynch, & Thomas, 1980; Katcher, 1981), recover more quickly from illnesses (Friedmann, et al., 1980; Levinson, 1969, 1972), suffer fewer episodes of depression (Francis, Turner, & Johnson, 1985; Katcher, 1981), enjoy life more (Francis et al., 1985; Mugford & M'comisky, 1975), are generally more satisfied with their lives (Francias et al., 1985), and experience more happiness (Connell & Lago, 1983). With the companionship of animals, humans have the comforts of a needed close contact relationship (McCulloch, 1981), develop a sense of self-respect, independence, and responsibility (Corson, Corson, & Gwynne, 1975), maintain contact with reality (Levinson, 1972), and enjoy greater self-esteem (Savishinsky, 1983; Katz, Atlas, Walker, & Crosman, 1982; Bieber, 1983; Messent, 1983; McCulloch, 1983; Mugsford & M'comisky, 1975; Mugford, 1980; Levinson, 1969, 1972).

Although the notion that pet animals provide emotional, physical, and mental benefits to their owners, has been a topic of discussion for many years, studies using psychometric measures of the differences between pet owners and non-owners are rare. Kidd and Feldman (1981) investigated the relationship between 104 elderly pet owners and non-owners using the
Multiple Adjective Check List. Pet owners scored significantly higher on the Nurturance Scale and significantly lower on the Succorance and Abasement Scales. Among males, owners scored higher on the Defensiveness scale and non-owners scored higher on the number of unfavourable adjectives checked. The authors concluded that pet ownership may be psychologically advantageous to the elderly.

Psychological determinants of owning pets were explored by Guttman (1981). Using the mathematical model of Fishbein and Ajzen (1975), he found that non-owners tended to be more independent than owners, and also that non-owners tended to avoid lasting obligations. Compared to pet owners, non-owners placed emphasis on having a neat and clean home, whereas pet owners preferred to avoid loneliness.

Some studies have found limited or negative effects from pet ownership. Ory and Goldberg (1984) studied the relationship between pet ownership and perceived happiness in elderly women. The results indicated a limited relationship between the presence of pets in the household and reported happiness; however, happiness derived from pet ownership was found to increase as socioeconomic status increased. Friedmann (1984) found no evidence for psychological and physiological differences between college-student owners and non-owners. Martinex and Kidd (1980) found no significant differences (for upper middle-class adults), between casual pet owners and non-owners regarding feelings of well-being. Cameron and Mattson (1972) found that considerable overlap existed between owners and non-owners along selected psychological dimensions, although the differences suggested that pet owners are less psychologically healthy than non-owners.

However, the studies showing negative effects, like many of those showing the positive effects of pet ownership, can be hard to interpret because the level of subjects’ attachment to their pets was not adequately measured. One step in this direction was in a study by Cameron, Conrad, Kirkpatrick, and Bateen (1966) in which a simple question was asked about the depth of the relationship between subject and pet.

The present study attempted to measure the degree of attachment in a more accurate manner. In addition, this study expands the limited research on personality characteristics of both pet owners and non-owners. Furthermore, the subjects in the current study were selected from a normal population, unlike the majority of groups of subjects from related studies who were selected from specific populations (e.g., disadvantaged, elderly, physically or mentally handicapped) or those for whom animals were used for rehabilitative purposes.

This study evaluated personality characteristics of self-esteem in the normal population of adult pet owners whose attachment to their pets was measured by means of a pet attachment survey. Pet owners were contrasted
on the same scales with people who deliberately choose not to have pets. Special attention was paid to social self-esteem as a component of general self-esteem. Previous research has suggested that pets act as “social lubricants” (Mugford & M’comisky, 1975), facilitating the interaction of pet owners with other people (Mugford, 1980; Corson, Corson, & Gwynne, 1975; McCulloch, 1983; Connell & Lago, 1983; Messent, 1983), and perhaps specifically affecting social esteem.

The four major hypotheses were:

1. The overall self-esteem of pet owners will be higher than that of non-owners, and within the pet owning group self-esteem will be positively correlated with degree of attachment.
2. The social self-esteem of pet owners will be higher than that of non-owners, and within the pet owning group, social self-esteem will be positively correlated with degree of attachment.
3. Pet owners will be more extraverted than non-owners, and within the pet owning group extraversion will be positively correlated with degree of attachment.
4. Pet owners will show lower levels of neuroticism than non-owners, and within the pet owning group neuroticism will correlate negatively with degree of attachment.

METHOD

Subjects

The “normal population” was defined as pet owners, and non-owners who were not institutionalised or who used pets as helping agents (e.g., hearing ear or guide dogs for the visually handicapped). Further, individuals who worked in animal-related fields, such as veterinarian assistants, animal behaviourists, and zoo workers, were excluded. Only those individuals who did not have a pet through preference were considered for the non-owner group.

Subjects were recruited by door-to-door canvassing in middle to low-middle income housing areas in Virginia and Washington, D.C. Each potential subject was given a package of information that included instructions, questionnaires and measurements, and a token gift. A total of 240 packages were given to potential subjects; 143 were returned for evaluation. Of the returned questionnaires, 130 were usable: 19 male and 63 female pet owners and 22 male and 26 female non-owners. Chi-squares for the demographic data were non-significant.
Measurements

The CENSSHARE Pet Attachment Survey. This survey measures human attachment to dogs and cats (Holcomb, Williams, & Richards, 1985) and was developed and validated by the Center for the Study of Human–Animal Relationships and Environments, University of Minnesota (Censhare). For the pet owners group, attachment was divided into three levels: high, moderate, and low.

Self-Esteem Scale. This scale (Rosenberg, 1965) is a ten-item inventory designed to measure attitudes toward the self.

Texas Social Behavior Inventory. The short form of the TSBI is an abbreviated version (16 items) of the Helmreich, Stapp, and Ervin (1974) TSBI.

Eysenck Personality Inventory. This inventory (EPI) is a well-known, standard measure of the adult personality characteristics of extraversion and neuroticism.

Social Desirability Scale. This scale is a short version of the Crowne and Marlowe (1961) Social Desirability Scale and was used to check validity of self-report.

RESULTS

Regarding the first hypothesis, analysis of variance and multivariate analyses of variance were performed to determine if overall self-esteem of highly attached pet owners was significantly higher than self-esteem of non-owners. (See Tables 1 and 2). No significant differences in self-esteem were found between the three levels of attachment of pet owners, $F(2, 68)=2.24$, $P<0.11$, or between the three levels of attachment within the pet owners group and non-owners, $F(3, 108)=0.74$, $P<0.52$. No significant differences

<table>
<thead>
<tr>
<th>Source</th>
<th>Df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>PR &gt; F</th>
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</thead>
<tbody>
<tr>
<td>Attachment</td>
<td>2</td>
<td>5.90</td>
<td>2.95</td>
<td>2.24</td>
<td>0.11</td>
</tr>
<tr>
<td>Error</td>
<td>68</td>
<td>89.75</td>
<td>1.31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
were found in self-esteem between males and females, $F(1, 108) = 0.36$, $P < 0.54$, nor did sex interact with pet ownership. These results were scored according to the recommendations of Rosenberg (1965). The results were further analysed by a 40-point scoring system and no significant results were determined.

The second hypothesis predicted that social self-esteem of highly attached pet owners would be significantly higher than for non-owners. Using multivariate analysis of variance, this prediction was not supported, $F(1, 108) = 0.44$, $P < 0.72$. Again, no sex differences were found nor did sex interact with any of the other variables. (See Table 3).

The third hypothesis stated that pet owners would score significantly higher on the extraversion scale than non-owners. No significant differences were found, using multivariate analysis of variance, in the extraversion scores based on the three levels of attachment, $F(3, 108) = 0.43$, $P < 0.73$. There were no significant differences in those scores of male and female owners and non-owners for extraversion, $F(3, 108) = 0.00$, $P < 0.95$, nor did sex interact with any of the other variables. (See Table 4).

### Table 2

Results of a multivariate analysis of variance of self-esteem of pet owners on three levels of attachment

<table>
<thead>
<tr>
<th>Source</th>
<th>$Df$</th>
<th>$SS$</th>
<th>$MS$</th>
<th>$F$</th>
<th>$PR &gt; F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Ownership</td>
<td>3</td>
<td>3.19</td>
<td>1.06</td>
<td>0.74</td>
<td>0.52</td>
</tr>
<tr>
<td>B. Sex</td>
<td>1</td>
<td>0.51</td>
<td>0.51</td>
<td>0.36</td>
<td>0.54</td>
</tr>
<tr>
<td>C. A × B</td>
<td>3</td>
<td>4.04</td>
<td>1.34</td>
<td>0.94</td>
<td>0.42</td>
</tr>
<tr>
<td>Error</td>
<td>108</td>
<td>154.91</td>
<td>1.43</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A. Attachment compared with non-owners;
B. Sex and combination of three levels of attachment;
C. Sex and non-owner.

### Table 3

Results of a multivariate analysis of variance of social self-esteem for pet owners on three levels of attachment

<table>
<thead>
<tr>
<th>Source</th>
<th>$Df$</th>
<th>$SS$</th>
<th>$MS$</th>
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<tr>
<td>A. Ownership</td>
<td>3</td>
<td>97.74</td>
<td>32.58</td>
<td>0.44</td>
<td>0.72</td>
</tr>
<tr>
<td>B. Sex</td>
<td>1</td>
<td>28.14</td>
<td>28.14</td>
<td>0.38</td>
<td>0.53</td>
</tr>
<tr>
<td>C. A × B</td>
<td>3</td>
<td>21.65</td>
<td>7.21</td>
<td>0.10</td>
<td>0.96</td>
</tr>
<tr>
<td>Error</td>
<td>108</td>
<td>8922.63</td>
<td>74.28</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A. Attachment compared with non-owners;
B. Sex and combination of three levels of attachment;
C. Sex and non-owner.
TABLE 4
Results of a multivariate analysis of variance of extraversion scores of pet owners on three levels of attachment

<table>
<thead>
<tr>
<th>Source</th>
<th>Df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>PR &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Ownership</td>
<td>3</td>
<td>25.83</td>
<td>8.61</td>
<td>0.43</td>
<td>0.73</td>
</tr>
<tr>
<td>B. Sex</td>
<td>1</td>
<td>0.07</td>
<td>0.07</td>
<td>0.00</td>
<td>0.95</td>
</tr>
<tr>
<td>C. A x B</td>
<td>3</td>
<td>13.36</td>
<td>4.45</td>
<td>0.22</td>
<td>0.88</td>
</tr>
<tr>
<td>Error</td>
<td>108</td>
<td>2170.68</td>
<td>20.09</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A. Attachment compared with non-owners;
B. Sex and combination of three levels of attachment;
C. Sex and non-owner.

The fourth hypothesis predicted that non-owners would show more neuroticism than pet owners. Using multivariate analysis of variance, however, this was not supported, $F(3, 108) = 0.32, P < 0.81$. Again, there were no sex differences, nor did sex interact with any of the other variables. (See Table 5).

A Pearson correlation coefficient $r$ was used to determine if there were correlations between the four personality variables as determined by the CENSHARE measure of attachment. (See Table 6). For the total attachment scores, there were no significant differences in the correlations; neuroticism ($r = 0.04, P < 0.70$), extraversion ($r = 0.18, P < 0.10$), self-esteem ($r = 0.16, P < 0.17$) and social behaviour ($r = 0.19, P < 0.10$). Relationship maintenance scores showed no correlation with neuroticism ($r = 0.09, P < 0.43$) and a significant negative correlation with extraversion ($r = -0.23, P < 0.04$). Correlations with self-esteem ($r = -0.21, P < 0.06$) and social self-esteem approached significance ($r = -0.22, P < 0.05$). Intimacy scores also showed

TABLE 5
Results of a multivariate analysis of variance of neuroticism scores of pet owners on three levels of attachment

<table>
<thead>
<tr>
<th>Source</th>
<th>Df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>PR &gt; F</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Ownership</td>
<td>3</td>
<td>29.36</td>
<td>9.78</td>
<td>0.32</td>
<td>0.81</td>
</tr>
<tr>
<td>B. Sex</td>
<td>1</td>
<td>22.59</td>
<td>22.59</td>
<td>0.73</td>
<td>0.39</td>
</tr>
<tr>
<td>C. A x B</td>
<td>3</td>
<td>26.01</td>
<td>8.67</td>
<td>0.28</td>
<td>0.83</td>
</tr>
<tr>
<td>Error</td>
<td>108</td>
<td>3344.97</td>
<td>30.97</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A. Attachment compared with non-owners;
B. Sex and combination of three levels of attachment;
C. Sex and non-owner.
no significant correlations with scores of neuroticism ($r = -0.03, P < 0.75$), extraversion ($r = -0.07, P < 0.49$), self-esteem ($r = -0.02, P < 0.86$) and social behaviour ($r = -0.09, P < 0.39$). Caution should be exercised regarding the importance of the significant correlations, however, in view of the chance factor within such a large number of correlations.

Because of consistently non-significant results, various exploratory analyses were conducted on the data. No significant differences were found for pet owners and non-owners on various independent variables when compared with the four personality variables: neuroticism, extraversion, self-esteem, and social self-esteem. Also, no significant differences were found when scores of dog owners were compared with cat owners on social desirability, age and the aforementioned personality variables.

In summary, according to the analysis of variance and the multivariate analyses of variance, there were no significant differences in the responses of pet owners and non-owners. The correlations revealed a negative correlation between relationship maintenance and extraversion and approached significance with a negative correlation between relationship maintenance and social behaviour.
DISCUSSION

Failure to find significant results for the four hypotheses prompted further investigation of the data through an exploratory analysis. In this analysis, it was determined that more females than males served as subjects in the study. This may be due to the afternoon hours of canvassing and the fact that more women were at home. However, having more female subjects does not account for the overall non-significant results. Most analyses were designed to show sex differences. Nevertheless, it was found that more female than male subjects owned pets. Demographic data also showed that pet owners were less likely to attend church than non-owners.

Relationship maintenance was involved in several significant or near-significant correlations. It correlated negatively with extraversion; that is, owners who worked to maintain their relationship with their pets tended to be introverts. Maintenance correlated negatively with self-esteem and with social self-esteem. This suggests that "active" pet owners—those who work at the relationship with their pets, independent of reported degree of attachment—are shy and retiring people with perhaps limited social skills. It is unlikely that pet ownership causes these traits, but it is possible that pets act as a substitute for human relationships for these people. The benefits of giving pets to institutionalised groups, such as the elderly, may be explained by citing these results. They may be so lonely and isolated, with such low self-esteem, that a pet acts as a substitute for human companionship and raises their scores, though not to the normal level. In non-institutionalised populations, shy people with moderately low self-esteem obtain pets for themselves, perhaps as a form of self-medication. It may also be suggested that relationship maintenance is a better measure of degree of attachment than the pet attachment scale. Further research is needed on these points.

Cameron et al. (1966) determined that pet owners were less psychologically healthy than non-owners. This was determined in part by scores from both groups on the Eysenck Personality Inventory. In the present study, it was concluded that pet owners were no different than non-owners in terms of neuroticism and, therefore, as healthy psychologically.

The results suggest that, in terms of the four personality variables tested, pet owners and non-owners are alike in the normal population. One possible reason for these results is that both pet owners and non-owners within the normal population are essentially the same in terms of personality traits. Rather, pet owners may be victims of social stereotyping. According to Tedeschi and Lindskold (1976), a social stereotype represents the consensus of opinion on this subject. Pet owners may be perceived by the general public as more lively, extraverted, and social, with higher self-esteem than non-owners, even if this is not true. Many pets of today are unique, colourful or unusual. This would enhance the observer's perception of the owner and,
therefore, create a stereotype. These individuals are remembered as a group by the majority of the population. Non-owners may be as lively, extraverted and social, with self-esteem as high as pet owners. But they are remembered as individuals, not as a specific group. In the past, many theories have been proposed on the differences in pet owners and non-owners. As with the general population, theorists may tend to rely on assumed stereotypical personality traits of pet owners, creating false assumptions about the therapeutic effects of pets.

Another possibility for the lack of significant differences in self-esteem and other personality scores could be due to the socioeconomic status of the subjects. Most subjects reported that they were from the low-middle to middle income class. It is possible that scores from a greater variety of income levels would show more variance in the subjects’ answers. Further research is needed on these points.

Although the CENSHARE Pet Attachment Survey, in view of its multiple-choice design, does not measure the precise duration of pet ownership, this important factor could be related to the previously discussed variable. Again, further research is needed.

In summary, it is reasonable to assume that there must be differences in individuals who choose to burden themselves, both financially and physically, by keeping and caring for a pet for many years, while others choose not to bother with this extra problem in their lives. It is conceivable that the difference is in the individuals’ attitude-based relevant values, rather than personality traits. By using a survey of values, e.g., the Rokeach value survey (Rokeach, 1968), it may be possible to determine the differences in values of pet owners and non-owners.

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REFERENCES


