

Pet Ownership and Social Isolation in China: Emotional Demand and Structural Constraints

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Abstract: As more people have started raising pets, there is now a growing sense of loneliness and social isolation among some, so some people believe that the desire for a pet may stem from this loneliness. However, this assumption does not explain why the emotional need for pets is not being met in practice; not all socially excluded individuals own pets. Based on the survey data of 294 people from all over China, this paper compares the perceptions of loneliness, well-being, living conditions and reasons for keeping pets among owners and non-owners in different areas in terms of household structure. According to the above data, although most people who have experienced social isolation wish to own a pet for emotional support, loneliness among these individuals is not strongly associated with pet ownership. Structural factors, such as residential mobility, household composition and time constraints, are more responsible for this phenomenon than other causes, and behavioural factors, including present bias and limited perceived behavioural control, further explain why emotional needs do not always result in ownership. Based on the above, an increase in the number of pets is not necessarily due to a rise in loneliness; instead, it may be related to emotional needs and structural limitations. Pets provide some emotional support for people lacking social interaction, but the desire for such companions is also economically limited.

Keywords: Pet Ownership; Social Exclusion; Companionship; Behavioral Constraints; Well-being.

1. Introduction

Recently, the number of pets owned by people around the world has increased. At the same time, worries about loneliness and social isolation have increased as more people live alone and their social lives have become more distant. Therefore, pets are often regarded as substitute companions and emotional support systems for people. The above parallel trends raise a question for researchers and the public: is the increase in pet ownership due to heightened loneliness, or can pets reduce loneliness and improve well-being directly?

The results of the previous study on the mental state of pet owners are inconsistent. Some studies have shown that the owners experience certain psychological and social rewards; however, other research has found that these effects are relatively small or require a certain level of social support for the individuals concerned. Therefore, the simple reason for people keeping pets is not loneliness; rather, many people who feel lonely do not own pets, and others who are not lonely do own them.

Given the above deficiencies, this paper will use a survey to investigate the relationship between loneliness, living conditions and quality of life and reasons for keeping pets. By comparing pet owners and non-owners on the loneliness and well-being indices, household structure and reasons for keeping pets, it is determined whether these differences stem from individual psychological factors or broader structural reasons. The rest of this paper is organised as follows. Section 2 reviews research on the benefits of pet ownership, the disputed link between pets and loneliness, and behavioural explanations for decision-making. Section 3 is the data and measurements. Section 4 is the experiment results. Section 5 introduces the results, and Section 6 summarizes.

2. Literature Review

2.1. Pets, Well-being, and Social Capital

Many studies have examined the psychological and social benefits of keeping pets. McConnell et al. found that pet owners have higher self-esteem, better physical fitness, and are less fearful and lonely than non-owners; thus, ownership may benefit the general population as well [1]. In addition to providing emotional support for people, pets have also been linked to a relatively high degree of social capital and increased interaction with others. Wood and others have proposed that pets serve as conduits for social capital by enabling neighbours to connect [2], and a follow-up study of four cities has found that pet ownership is associated with higher social capital in all these urban environments [3].

2.2. The Contested Link Between Pets and Loneliness

Other studies have not found a direct relationship between pet ownership and reduced loneliness. In a study of people living alone, neither pet ownership nor a sense of attachment to pets was independently related to loneliness or depression; instead, their effects differed considerably according to the level of social support experienced by the individual, and this level of social support was itself a significant predictor of loneliness. People who have strong social support are not as lonely as those with low support [4]. Evidence from China shows that the association between pets and emotions is also modified by demographic and structural factors. In a study of rural older adults who had experienced a social loss, Zhang and others found that the relationship between pet ownership and cognitive frailty varied by sex; that is to say, the protective effect of pets is not the same for everyone but depends on individual and environmental factors [5].

2.3. Behavioral Constraints and Motivations

Separately, some scholars have begun to explore why emotional needs are not always satisfied through pet ownership. Yin and his colleagues have studied Chinese adolescents and young adults; according to the theory of planned behaviour, their reasons for keeping pets are also influenced by a sense of control and social norms [6]. In accordance with Ajzen's theory of planned behaviour, one believes that a person's behaviour will be driven by their intention and perceived behavioural control [7]. Behavioural economics also provides supplementary explanations for the gap between intention and behaviour. Kahneman and Thaler have distinguished between decision utility, which is the level of satisfaction people anticipate in making a choice, and experienced utility, the actual satisfaction gained; these two are often different [8]. Laibson's model of present bias further indicates that people give more weight to the immediate cost than to the long-term benefit [9]. These accounts indicate that the desire for pets is both an emotional need and a set of behavioural and structural constraints.

3. Methodology

3.1. Research Design

This study only collected voluntary, anonymous survey data from the participants and did not involve any intervention or sensitive procedures; therefore, institutional review board (IRB) approval was not needed. An online cross-sectional survey design was employed to conduct all-around research on the social reasons for pet ownership and to answer the central problem of whether the increase in pet ownership is related to rising social loneliness. The three contents of the survey were social-psychological indicators (loneliness and well-being), demographic and environmental factors, and pet-related behaviours and motivations. A total of 294 valid answers were collected for analysis.

3.2. Participants

A total of 294 people were recruited via a Chinese online survey platform (Wenjuanxing). The 120 men and 168 women in the sample accounted for about 40.82% and 57.14% respectively, and a small proportion (2.04%) did not wish to disclose their gender. The people in the sample were of various ages, including students (33.67%), employed professionals (32.31%), and self-employed and others (29.25%). The different living situations and backgrounds of these people are relatively diverse, so the research may be generalised. The participants were from all over China; although most lived with others, 42 people (14.29%) lived alone and were thus included in the group for social isolation.

The sample has a relatively high degree of both environmental and social mobility. Almost half of the participants (46.6%) have moved house in the past year, and others have changed their jobs (21.43%) or their relationship status (11.22%). Household income was between 100,000 yuan and over 1 million yuan per year; thus, it included all income levels and did not favour a particular economic group. To ensure the quality of the data, a trap question (Q33) was included in the survey, and only the answers provided by those who followed the instructions were considered valid. Participation was voluntary and anonymous; no personal information was collected, so the privacy of the participants could be guaranteed, and thus they felt free to answer truthfully about problems such as loneliness.

3.3. Measures

The contents of the survey were loneliness and well-being, pet-owning status, reasons for and obstacles to pet ownership, and demographic information.

3.3.1. Loneliness Index

Loneliness was measured by a three-item self-report scale of the absence of company (Q1), feelings of exclusion (Q2), and social isolation (Q3). Responses were recorded on a four-point Likert scale of never to often (1-4). Averaging the responses to the three items produces a composite loneliness score, and a higher score indicates more loneliness.

3.3.2. Well-being Index

Psychological well-being was assessed by a single self-report item on one's general mood in the past two weeks (Q4), and it was recorded on a five-point Likert scale (1-5). A relatively high score indicates better psychological health.

3.3.3. Pet Ownership Dynamics

The four indicators of pet-owner behaviour are ownership status, type of pet, reason for keeping a pet, and level of interaction. Ownership status was determined by asking whether the participants currently owned, had previously owned or had never owned a pet (Q9). For participants who have owned pets, the type of their pet was recorded (Q10). Motivations (Q13 and Q15) and barriers (Q14 and Q16) were collected using multiple-choice items to identify specific social needs (e.g., companionship, routine-building). Interaction intensity was shown as the average amount of time a person spent, or expected to spend, with pets (Q18 and Q19), in categories ranging from "0-30 minutes" to "3 hours or more".

3.3.4. Social Environment and Life Events

The three indices of social and environmental stress are as follows. Question 5 asks how often participants take part in social activities, and the frequency of these interactions is recorded here. Living Arrangements (Q6) divided participants into categories such as living alone, living with a roommate, or living with family, and the number of people in each household was recorded. One of the types of living areas (Q7) is rural, suburban or urban. In addition, a five-item checklist of major life events (Q8) was employed to measure how much recent environmental instability had occurred, such as moving, changing jobs or relationships. Two comparative items were used to measure perceived social trends: participants were asked how lonely their community felt compared to two years ago (Q31) and how widespread pet ownership in their community had changed over the same period (Q32), both on a five-point scale.

3.4. Transparency and Openness

All survey materials and data of this study are stored securely and are available to the corresponding author. The survey was carried out anonymously through an online platform (Wenjuanxing), and all participants completed the questionnaire voluntarily. Although the raw data cannot be published publicly due to platform restrictions, all analyses will be presented in this paper. The sample size ($N = 294$) is large enough to meet the statistical power requirements for the above analysis. This study was not pre-registered.

4. Results

4.1. The Paradox Between Social Needs and Ownership Behavior

Based on the above statistics, there is no strong correlation between people's subjective needs in society and their decision to own a pet; at the level of society as a whole,

however, a clear link has been found between rising loneliness and pet ownership. As shown in Table 1, although the mean scores for lack of companionship (Q1) varied among the ownership-status groups (Q9), this difference was not statistically significant ($p > 0.05$); therefore, pet ownership was not associated with a lack of companionship at the individual level.

Table 1. Distribution of perceived companionship by pet ownership status.

Pet Ownership Status (X) \ Perceived Companionship (Y)	Never	Rarely	Sometimes	Often	Total	Average Score
Yes	3 (2.73%)	26 (23.64%)	44 (40%)	37 (33.64%)	110	3.05
Previously owned, no longer	1 (1.19%)	33 (39.29%)	29 (34.52%)	21 (25%)	84	2.83
Never owned	2 (2%)	27 (27%)	30 (30%)	41 (41%)	100	3.10

Note: Percentages within each row sum to 100%. The average score is derived from an ordinal scale (Never = 1 to Often = 4). Analysis of variance showed no significant effect of pet ownership on companionship ($p > 0.05$).

As shown in Table 2, the perceived change in pet ownership among one's social circle was significantly correlated with a change in self-reported loneliness of the community ($F = 19.598$, $p < 0.001$). Participants who observed an increase in the number of pets reported higher levels of loneliness (mean

= 3.14); those who mentioned more pets among their peers also had a relatively higher average loneliness score (2.90) compared with those who reported no change (2.36). It can be inferred from the above that an increase in the number of pets is linked to loneliness.

Table 2. Perceived change in community loneliness by perceived change in pet ownership among peers.

Pet ownership among peers (X) / Loneliness among peers (Y)	Decreased a lot	Decreased slightly	Remained the same	Increased slightly	Increased a lot	Total
No change	10 (25.64%)	9 (23.08%)	16 (41.03%)	4 (10.26%)	0 (0.00%)	39
Slightly more	3 (4.35%)	16 (23.19%)	38 (55.07%)	9 (13.04%)	3 (4.35%)	69
Much more	12 (12.63%)	12 (12.63%)	37 (38.95%)	19 (20.00%)	15 (15.79%)	95
Uncertain	3 (3.30%)	1 (1.10%)	33 (36.26%)	33 (36.26%)	21 (23.08%)	91

Note: Row percentages are shown in parentheses. Loneliness scores are calculated on a five-point scale (Decreased a lot = 1, Increased a lot = 5).

Evidence of a latent demand is presented in the motivational data. As shown in Figure 1, 37.62% of all participants (Q13 and Q15) named companionship as the main reason for owning or wanting to have a pet. Among the never-owned subgroup, companionship (79%) and a wish to care for animals (54%) were reported significantly more often than in the current- or previous-owner groups (Table 3). Based on the above analysis, although practical difficulties prevent people from owning pets individually, the growing number of pet owners is also related to a psychological need for social connection.

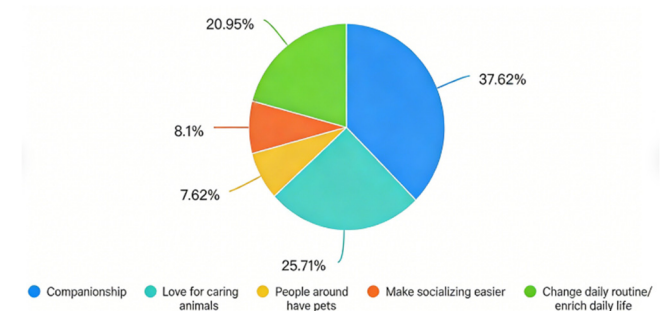


Figure 1. Motivations for pet ownership.

Table 3. Motivations for pet ownership among the never-owned group.

Pet Ownership Status (X) \ Motivations (Y)	Companionship	Enjoy taking care of animals	Others have pets	Makes socializing easier	Changes daily routine / enriches daily life	Total
Never owned	79 (79%)	54 (54%)	16 (16%)	17 (17%)	44 (44%)	100

4.2. Individual Demographics and Life Stability as Primary Factors

Based on the above data, the main reason for pet ownership is a change in family demographics, not psychological needs. Loneliness leads to a wish for company; however, the actual circumstances and gender of the individuals involved determine whether this wish is realised.

The role of gender is shown in the survey results. Among

the female respondents, 45.83% had pets; among the male respondents, only 24.17% did, and the two groups were significantly different (Table 4).

Stability in the home is another reason people have pets. The proportion of recent movers is higher in the never-owned group than in the current-owner group.

As shown in Table 5, the proportion of movers is highest among those who have never owned pets (55%) and lower among current pet owners (46.36%). This indicates that

people with more stable lives are better able to meet their social needs through pets; thus, it can be assumed that the desire for pets is linked to a person's living conditions, and

only when these conditions are met will the need for pets be satisfied.

Table 4. Pet ownership status by gender.

Gender (X) \ Pet Ownership Status (Y)	Yes	Owned before, not anymore	Never owned	Total
Male	29 (24.17%)	37 (30.83%)	54 (45.00%)	120
Female	77 (45.83%)	45 (26.79%)	46 (27.38%)	168
Prefer not to say	4 (66.67%)	2 (33.33%)	0 (0.00%)	6

Table 5. Association between pet ownership experience and reported major life events.

Pet Ownership Status (X) \ Y	Moving	Changing jobs	Relationship changes	Loss of a loved one	Health issues	None	Total
Yes	51 (46.36%)	10 (9.09%)	14 (12.73%)	11 (10.00%)	34 (30.91%)	41 (37.27%)	110
Owned before, not anymore	31 (36.90%)	24 (28.57%)	12 (14.29%)	12 (14.29%)	20 (23.81%)	32 (38.10%)	84
Never owned	55 (55.00%)	29 (29.00%)	7 (7.00%)	11 (11.00%)	23 (23.00%)	41 (41.00%)	100

4.3. The Role of Household Structures

As shown in Table 6, the proportion of people living with family who own pets is the highest at 47.93%, and it is significantly higher than for those who live alone or with roommates. The proportion of independent living by ownership is 28.57 per cent. The reason for this difference may be a more supportive environment and resource cushion at home. Another reason is that there is no delegated caregiving; thus, the individual must bear the responsibility

of time commitment and cleanliness alone. Although family members may share the burden of pet care, it is often too heavy for a single person to manage on their own. The data in Figure 2 (Q14) also support this. Among all hesitation reasons, time investment was the main reason (31.05%), closely followed by responsibility for cleaning (28.77%), and the proportion of those citing economic cost and emotional pain was relatively small. It shows that the main problems are the time commitment required for pet care and the organisation of cleaning; both can be solved by a family structure.

Table 6. Pet ownership status by living arrangement.

Living Arrangement (X) \ Pet Ownership Status (Y)	Yes	Owned before, not anymore	Never owned	Total
Living alone	12 (28.57%)	15 (35.71%)	15 (35.71%)	42
Living with a roommate/housemate	27 (31.03%)	26 (29.89%)	34 (39.08%)	87
Living with family	58 (47.93%)	36 (29.75%)	27 (22.31%)	121
Dormitory (with roommates)	6 (37.5%)	2 (12.5%)	8 (50%)	16
Other	7 (25%)	5 (17.86%)	16 (57.14%)	28

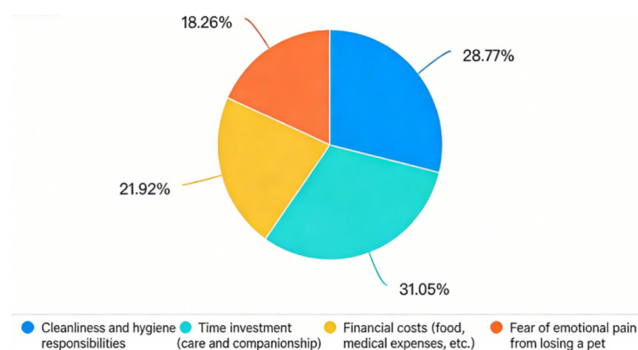


Figure 2. Primary concerns regarding pet ownership.

4.4. Pets as Emotional Compensators

In addition to the reasons for possession related to demographics and logistics, pets also provide emotional support. Lonely people who do not have many friends often take pets to live with.

Based on the regression results, perceived social exclusion is positively associated with pet ownership. As shown in Table 7, the regression coefficient for feeling excluded (Q2) is 0.28, and it is both positive and statistically significant ($p =$

0.000); that is to say, those who are more socially excluded are more likely to seek companionship in animals. Although the model has a small explanatory power ($R^2 = 0.045$), the overall model is significant ($F(4, 289) = 3.393, p = 0.010$), and thus social rejection can be considered a relatively reliable, albeit partial, psychological predictor of ownership. A weaker explanatory power indicates that the reason for owning a pet is not explicitly clear; however, social exclusion is still a plausible reason that should not be ignored.

The supporting functions of pets mentioned in items Q20-Q24 also serve as compensatory mechanisms, with scores of 1 (strong disagreement) and 5 (strong agreement). The mean of the agreement for Q22, "Whether you consider your pet a member of the family", was relatively high at 3.76; thus, owners have incorporated their pets into their primary social circle to some extent. Respondents also indicated a strong desire to be with their pets in bad moods (Q23, mean 3.71), thus showing that pets provide emotional support. Additionally, an item that said more interaction with people nearby would make respondents less likely to keep a pet (Q20) had a mean of 3.17, suggesting that increased social interaction may slightly increase the likelihood of not owning a pet. In short, pets may serve as a substitute for the lack of

interaction with people in one's life.

Table 7. Regression analysis of social isolation and social activity on pet ownership.

Item	Regression coefficient	t-value	p-value	VIF
Constant	1.92	6.04	0.000	–
Lack of companionship (Q1)	–0.08	–1.12	0.262	1.64
Feeling excluded (Q2)	0.28	3.58	0.000	2.08
Social isolation (Q3)	–0.15	–1.95	0.052	1.99
Social activity frequency (Q5)	–0.04	–0.67	0.504	1.30
Sample size	294			
R ²	0.045			
Adjusted R ²	0.032			
F	F(4, 289) = 3.393, p = 0.010			

5. Discussion

The results show a contradiction: Although social exclusion is responsible for a large number of people wanting pets, their actualisation of pet ownership is limited by structural stability and resource availability. This contradiction can be explained by separating decision-utility from experienced-utility. As Kahneman and Thaler have proposed, people often make choices based on the expected level of satisfaction (decision utility), and this may differ from how they feel after the choice (experienced utility) [8]. Although 79% of the non-owners cited companionship as their main reason, ownership status was not statistically associated with loneliness scores in the entire sample. Therefore, although many people are moved emotionally, their actual decision to keep a pet is also influenced by other circumstances. Ajzen believes that a person's behaviour is determined by their intention and perceived behavioural control, and the latter may be weak in this case [7]. In addition, due to the problem of present bias, people tend to give more weight to the immediate costs of ownership—cleaning, time investment and expenses—than to the long-term emotional rewards [9]. Loneliness does not directly lead to pet ownership; rather, according to the data, stability and support are the reasons.

Stability threshold can be used to explain the difference between psychological need and behaviour. Non-owners were more likely to move out of the community (55%) than owners (46.36%). Participants living with family had a much higher ownership rate (47.93%) than solitary dwellers (28.57%). As shown in Figure 2, the main reasons for the above problems are a lack of time (31.05%) and poor hygiene (28.77%). Without the resource buffer of a household structure, these costs may exceed the emotional benefits for the most isolated people.

Those who can overcome the above obstacles benefit from the compensatory role of pets. Social exclusion (Q2) is positively correlated with ownership, and thus pets may serve as emotional support. By considering pets members of the family (Q22, mean 3.76) and obtaining emotional support from them during times of depression (Q23, mean 3.71), one can reduce the stress of loneliness. The result for social substitution (Q20) was also relatively high, and pets frequently take on the role of compensating for a lack of human contact.

This study has the following deficiencies. It only has a Chinese sample and is thus difficult to apply to other countries.

The relatively small R² (0.045) of the regression model shows that many other factors influencing pet ownership have not been identified, such as allergies. As a cross-sectional study, it cannot determine the cause. Future research will use a longitudinal design to examine the effects of pet ownership on mental health over time and explore community-shared pet programs as low-threshold options for isolated people.

6. Conclusion

Based on the above studies, although urban loneliness has created a large hidden demand for pets, actual pet ownership is limited by factors such as demographic stability and family support. Pets can offer some emotional support for people who feel socially isolated, but most vulnerable groups are currently unable to have pets, such as those living alone or moving frequently. Given the increase in urban isolation, the above results indicate that easy-to-obtain animal companionship may be used to promote public health. Broadening pet-inclusive housing policies and building community-based support systems could help reduce the stability premium of ownership. By lowering the barriers to forming a human-animal bond, contemporary society can use the benefits of companion animals for people living alone.

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