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Analysis of factors affecting pet owners traveling with pets in China

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Abstract

This study delves into the determinants that influence pet owners' choices to include their pets in travel plans, focusing on the concept of pet attachment. Data were gathered through a questionnaire survey and subjected to rigorous analysis using SPSS software. The investigation commences by scrutinizing variations in pet attachment across different demographics, such as gender, age, marital status, and occupation. Subsequently, we employ established research frameworks to dissect pet attachment into distinct dimensions. Within these dimensions, we explore the correlations with two key aspects:The willingness of pet owners to travel with their pets and the significance attached to pet-inclusive journeys.We have reached the following conclusions:-Firstly, pet attachment showed no significant differences in terms of gender, age, and occupation, but it exhibited a significant difference in marital status. Willingness to travel with pets showed no significant differences in terms of gender, age, and marital status, but showed significant differences in occupation. The importance of traveling with pets showed no significant differences in terms of gender, age, occupation, and marital status.Secondly, the relationship between pet attachment dimensions and the willingness to travel with pets was as follows: the pet status dimension and interpersonal substitution dimension showed no significant relationship with the willingness to travel with pets, while the general attachment dimension and interpersonal substitution dimension exhibited a significant positive relationship.Lastly, the relationship between pet attachment dimensions and the importance of traveling with pets was as follows: the pet status dimension showed no significant relationship with the importance of traveling with pets, while the general attachment dimension and interpersonal substitution dimension exhibited a significant positive relationship.

keywords

The Analects of Confucius; International communication; Problems and difficulties; Communication strategy

Introduction

Pets, as indispensable companions and family members in people's lives, have led many pet owners to pursue the increasingly popular desire of traveling with their beloved animals. However, why do some pet owners lean towards the idea of bringing their pets along while others remain more conservative? Is there a causal relationship between this type of travel and pet attachment? This study aims to explore the causal relationship between the degree of pet attachment in pet owners and their inclination to travel with their pets. By delving into this relationship, we can gain a better understanding of why pet owners choose to travel with their pets and how pet attachment influences their travel behavior.

To begin with, this research will focus on the emotional attachment between pet owners and their pets, as it constitutes the core element of pet attachment. We will pay attention to the emotional expressions and inter-

Vol.4 Iss.1 2023
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active behaviors between pet owners and their pets, analyzing how this emotional attachment impacts pet owners' decisions regarding traveling with their pets. Additionally, we will explore other factors that may influence pet owners' choices to bring their pets on trips, such as characteristics related to pet owners themselves. These factors may have intricate associations with pet attachment, and through a thorough examination of these influencing factors, we can comprehensively decipher the motives behind pet owners' decisions to travel with their pets. By synthesizing the causal relationship between pet attachment and traveling with pets, we aim to provide deeper insights for pet owners and offer targeted improvement recommendations for the tourism industry and related sectors. Through the outcomes of this research, we aspire to enhance the travel satisfaction of pet owners, foster emotional connections between pet owners and their pets, and further promote the development of the pet-friendly travel market.

Literature Review

Pet Attachment

The definition of pet attachment may exhibit subtle variations among different researchers. However, these definitions commonly underscore the unique emotional bonds and interdependence between humans and their pets, reflecting people's shared recognition of the emotional connection and concern for pets. Generally, pets are perceived as secure havens, providing unconditional emotional support and solace to their owners when needed, without judgment (Dotson & Hyatt, 2008). Higher levels of pet attachment bring greater benefits to pet owners. Pet owners can acquire new knowledge, alter their values, expand their social circles, and foster friendships, reaping social benefits from their interactions(Jehn-Yih Wong & Liu, 2023a). Unlike parents who often have higher expectations, pets display unabashed affection towards children. The happiness children derive from their interactions with pets can soothe the traumas they may encounter in life(Levinson, 1978). Studies also indicate a significant correlation between pet attachment and pet owners' life satisfaction and happiness(Roux & Wright, 2020).The human-pet relationship typically fulfills the four prerequisites of an attachment relationship: seeking proximity, serving as a secure base, offering emotional security, and alleviating separation distress. Jehn-Yih Wong and colleagues posit that pet attachment is positively correlated with pet owners' life satisfaction, particularly in today's hectic society where living alone has become commonplace. Consequently, people choose pets that align with their needs to enhance personal life satisfaction and, in turn, improve their mental and physical well-being (Jehn-Yih Wong & Liu, 2023b).To quantify individual levels of pet attachment, various tools have been developed, with the Lexington Attachment to Pets Scale (LAPS) being the most widely employed instrument to date(Timothy P. Johnson & Stallones, 1992). Regarding measurements of motivations for pet owners to travel with their pets, scales encompass dimensions such as perceived benefits of traveling with pets, pet attachment, socialization, reputation, compensation, rewards, and novelty. Pet attachment stands out as a pivotal dimension influencing the decision of pet owners to embark on journeys with their beloved companions (Tang et al., 2022).

Pets tourism

The desire of pet owners to vacation with their pets has grown stronger as pets are increasingly regarded as integral members of the family(Chan & Tung, 2022). The rising expenditures associated with dogs and the

continuous increase in costs invested in them have profoundly influenced people's lifestyles(Dotson & Hyatt, 2008). Research indicates that individuals who are divorced, widowed, or childless exhibit stronger attachment to their pets, and younger, single demographics are more likely to travel with their pets(Carr & Cohen, 2009). Sharing pet travel experiences with friends within one's social circle enhances the overall experience for pet owners(Chan & Tung, 2022). However, there are significant challenges associated with traveling with pets at present, as restrictions in retail, accommodation, and transportation can impact the experience of traveling with pets. Overcoming these types of limitations poses a substantial challenge for pet owners. While the desire of most dog owners to take their pets on vacation is high, the actual realization of this desire remains relatively low, with one of the primary obstacles being pet-friendly accommodations (Carr & Cohen, 2009).

Research Design

Data Collection

This study employs a questionnaire survey method with the aim of investigating the causal relationship between pet owners' level of pet attachment and their willingness to travel with their pets. Data will be collected through the Credemo platform, targeting individuals who own various types of pets, including dogs, cats, and other pets. The collected data will be analyzed using statistical software. The research will employ methods such as descriptive statistics, correlation analysis, and regression analysis to explore the causal relationship between pet attachment and the act of traveling with pets.The online questionnaire is designed to include the following sections:

Personal Information: Collecting basic participant information such as age, gender, education level, etc.

Pet Attachment Scale: Utilizing the Lexington Attachment to Pets Scale (LAPS) to measure the level of pet attachment among pet owners. LAPS is the most widely used pet attachment scale, comprising 23 questions, including two reverse-scored questions (Question 8 and Question 21), scored on a scale of 1 to 4. It covers three dimensions: "General Attachment," "Interpersonal Substitution," and "Pet's Status." The internal consistency coefficient of the scale is 0.937, and the Cronbach's coefficient is 0.945.

Pet Travel Behavior: Investigating whether pet owners have previously traveled with their pets and whether they are willing to do so.

Research Questions

This study focuses on the impact of pet attachment on traveling with pets, selecting it as both an independent and dependent variable. Starting from the demographic characteristics of the sample, we analyze whether fac

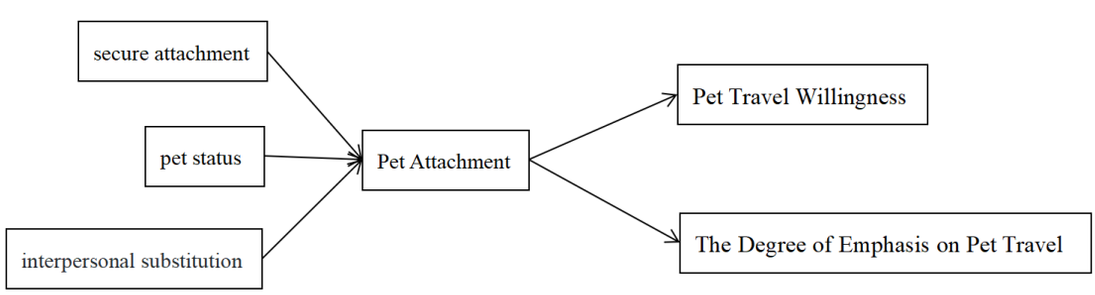

Figure 1: Research Model Diagram

tors such as gender, education level, age, occupation, and whether one owns pets influence pet attachment (PA) and Pet Travel Willingness(PTW). Does pet attachment affect individuals' willingness to travel with pets and the Degree of Emphasis on Pet Travel(DEPT)

Data Analysis

Data Cleaning

A total of 322 questionnaires were collected before and after the survey. After data collection, several data cleaning steps were conducted, including handling missing values, detecting and addressing outliers, and checking data for logical consistency to ensure the reliability of the analysis. Questionnaires were deemed invalid and subsequently removed under the following circumstances: excessively short completion times, extensive repetitive answers, highly patterned responses, and answers to similar questions that were completely opposite. Ultimately, 260 valid questionnaires were selected, with 62 questionnaires excluded, resulting in an effective rate of 80.74%.

Descriptive Statistical Analysis

The formal questionnaire yielded 260 valid samples, and their characteristics were statistically described based on gender, age, education, marital status, and occupation. Regarding gender, there were 176 males, accounting for 67.69%, and 84 females, accounting for 32.31%. The age group most represented was 31-40 years, constituting 45% of the sample, as this age range mainly includes married couples with families, which are the primary focus of this study. Marital status showed that 83.85% of participants were married. Education levels were primarily at the bachelor's degree or above, with 93.07% of respondents falling into this category. The most common occupation was company employees, making up 76.15% of the sample, although other occupation types were also represented. These data indicate that the survey is scientifically reasonable and encompasses a wide range of demographic groups.

Analysis of Differences in Relevant Factors

a.Differences in the Emphasis on Pet-Inclusive Travel, Willingness to Travel with Pets, and Pet Attachment Across Gender Dimensions

To investigate whether there are differences in the importance of pet travel, willingness to travel with pets, and pet attachment based on gender, an independent samples t-test was conducted on the relevant variables.

Variable Name	Variable Valu	Sample Size	Mean	Standard Deviation	T-test	Welch's T-test	Mean Difference	Cohen's d Value
PA	1	84	79.19	4.942	T=1.709	T=1.733	1.15	0.227
	2	176	78.04	5.142	P=0.089*	P=0.085*		
	Total	260	78.412	5.097				
PWT	1	84	3.488	0.526	T=-0.422	T=-0.418	0.029	0.056
	2	176	3.517	0.512	P=0.673	P=0.676		
	Total	260	3.508	0.516				
DEPT	1	84	3.369	0.533	T=1.118	T=1.12	0.079	0.148
	2	176	3.29	0.536	P=0.265	P=0.264		
	Total	260	3.315	0.535				

Note: ***, **, and * represent significance levels of 1%, 5%, and 10%, respectively.

Table 1 Independent Samples T-Test Analysis Results Table

Based on the results in Table 1, it can be observed that there are no significant differences in the importance of traveling with pets, willingness to travel with pets, and pet attachment across gender dimensions (1 = male, 2 = female), as all p-values are greater than 0.05.

b.Differences in the Emphasis on Pet-Inclusive Travel, Willingness to Travel with Pets, and Pet Attachment Across Age Groups

To examine whether there are differences in the importance of traveling with pets, willingness to travel with pets, and pet attachment across different age groups, the Kruskal-Wallis test was used to analyze the relevant variables. The results are presented in Table 2.

Table 2: Kruskal-Wallis Test for Importance of Traveling with Pets, Willingness to Travel with Pets, and Pet Attachment Across Age Groups

Variable Name	Variable Value	Sample Size	Mean	Standard Deviation	Statistical Measure	P	Cohen's d Value
PWT	3	117	3	0.501	3.398	0.494	0.019
	2	102	4	0.499			
	4	15	3	0.632			
	5	20	4	0.598			
	1	6	3.5	0.548			
	Total	260	4	0.516			
PA	3	117	80	5.449	4.727	0.316	0.032
	2	102	80	4.744			
	4	15	80	6.327			
	5	20	81	2.9			
	1	6	79.5	4.792			
	Total	260	80	5.097			
DEPT	3	117	3	0.536	1.497	0.827	0.024
	2	102	3	0.534			
	4	15	3	0.617			
	5	20	3	0.503			
	1	6	3.5	0.548			
	Total	260	3	0.535			

Note: ***, **, and * represent significance levels of 1%, 5%, and 10%, respectively.

The results from Table 2 indicate that the p-values for all three variables are greater than 0.05. This suggests that there are no significant differences in pet travel importance, pet travel willingness, and pet attachment across different age groups (1=20 years and below, 2=21-30 years, 3=31-40 years, 4=41-50 years, 5=51 years and above).

c.Differences in the Dimensions of Pet Travel Importance, Pet Travel Intentions, and Pet Attachment with Regard to Marital Status

To examine whether there are differences in pet travel importance, pet travel willingness, and pet attachment across different marital status categories, Kruskal-Wallis tests were conducted. The results are shown in Table 3.

Vol.4 Iss.1 2023
https://doi.org/10.37420/j.cer.2023.015

Table 3: Kruskal-Wallis Test for Pet Travel Importance, Willingness, and Pet Attachment Across Marital Status

Variable Name	Variable Value	Sample Size	Mean	Standard Deviation	Statistical Measure	P	Cohen's d Value
PWT	2	218	4	0.519	1.151	0.562	0.061
	1	41	3	0.506			
	3	1	3				
	Total	260	4	0.516			
PA	2	218	80	4.759	10.598	0.005***	0.095
	1	41	78	6.12			
	3	1	71				
	Total	260	80	5.097			
DEPT	2	218	3	0.513	2.994	0.224	0.04
	1	41	3	0.629			
	3	1	3				
	Total	260	3	0.535			

Note: ***, **, and * represent significance levels of 1%, 5%, and 10%, respectively.

Based on the results from Table 3, the variables PWT and DEPT both have p-values greater than 0.05, indicating that the statistical results are not significant. This suggests that there are no significant differences in PWT across different marital status categories. However, for the variable PA, the test result yields a p-value of 0.005***, which is less than 0.05. This indicates that there is a significant difference in PA across different marital status categories (1 = Single, 2 = Married, 3 = Divorced or Widowed).

d. Differences in pet travel importance, pet travel willingness, and pet attachment across occupational categories.

To examine whether there are differences in pet travel importance, pet travel willingness, and pet attachment across occupational categories, a Kruskal-Wallis test was conducted on the relevant variables. The results are presented in Table 4.

Table 4 :presents the Kruskal-Wallis test results for pet travel importance, pet travel willingness, and pet attachment across occupational categories.

Variable Name	Variable Value	Sample Size	Mean	Standard Deviation	Statistical Measure	P	Cohen's d Value
PWT	3	198	3	0.51	16.164	0.003***	0.088
	4	2	4	0			
	1	19	3	0.496			
	2	32	4	0.545			
	5	9	4	0			
	Total	260	4	0.516			
PA	3	198	80	5.037	7.993	0.092*	0.048
	4	2	75.5	3.536			
	1	19	76	6.59			
	2	32	80	4.683			
	5	9	79	3.536			
	Total	260	80	5.097			
DEPT	3	198	3	0.533	5.484	0.241	0.04
	4	2	3.5	0.707			
	1	19	3	0.524			
	2	32	3	0.471			
	5	9	4	0.726			
	Total	260	3	0.535			

Note: ***, **, and * represent significance levels of 1%, 5%, and 10%, respectively.

As shown in Table 4, the Kruskal-Wallis test results indicate that for the variable PWT, the p-value is 0.003***<0.05, indicating a significant difference among different occupations regarding pet travel willingness. However, for the variables PA and DEPT, the p-values are both greater than 0.05, indicating no significant differences among different occupations (1=students, 2=government employees, 3=company employees, 4=self-employed, 5=other) in these two dimensions.

Regression Analysis

Firstly, a regression analysis is conducted on the variables of different dimensions in the scale. Based on this, the influence of pet attachment on the willingness to travel with pets and the importance attached to traveling with pets is analyzed. Before conducting the regression analysis, it is necessary to perform a correlation analysis on the variables of different dimensions in each scale to meet the prerequisites of regression analysis. The results are shown in Table 6. It can be observed that, except for some dimensions in the importance attached to traveling with pets, there are significant correlations among the sub-dimensions of other variables. Therefore, further regression analysis can be conducted.

Vol.4 Iss.1 2023
https://doi.org/10.37420/j.cer.2023.015

Table 5: Correlation Analysis of Pet Attachment, Willingness to Travel with Pets, and Importance of Traveling with Pets

	secure attachment	interpersonal substitution	pet status	PWT	DEPT
secure attachment	1(0.000***)	0.63(0.000***)	0.378(0.000***)	0.262(0.000***)	0.385(0.000***)
interpersonal substitution	0.63(0.000***)	1(0.000***)	0.459(0.000***)	0.228(0.000***)	0.377(0.000***)
pet status	0.378(0.000***)	0.459(0.000***)	1(0.000***)	0.18(0.004***)	0.257(0.000***)
PWT	0.262(0.000***)	0.228(0.000***)	0.18(0.004***)	1(0.000***)	-0.121(0.052*)
DEPT	0.385(0.000***)	0.377(0.000***)	0.257(0.000***)	-0.121(0.052*)	1(0.000***)
Note: ***, **, and * represent significance levels of 1%, 5%, and 10%, respectively.					

a.Pet Attachment and Importance of Traveling with Pets

In this study, we hypothesize that pet attachment positively influences the importance attached to traveling with pets. In specific dimensions, we expect that higher pet status, stronger interpersonal substitution, and greater general attachment to pets will be associated with a higher importance placed on traveling with pets. In this section, we will verify the correlation between these variables and analyze the relationships among different dimensions.More specifically, the importance attached to traveling with pets will be the dependent variable, and general attachment, interpersonal substitution, and pet status will be the independent variables in the regression analysis. The results are presented in the table below:

Table 6: Regression Analysis of Pet Attachment and Importance of Traveling with Pets

Linear Regression Analysis Results, n=260									
	unstandardized coefficient		standardized coefficient	t	P	VIF	R^2	adjusted R^2	F
	B	standard error	Beta						
constant	-0.206	0.51	-	-0.403	0.687	-	0.183	0.174	F=19.155 P=0.000***
pet status	0.134	0.107	0.08	1.25	0.213	1.289			
secure attachment	0.573	0.181	0.232	3.168	0.002***	1.686			
interpersonal substitution	0.327	0.129	0.194	2.541	0.012**	1.831			
Dependent Variable:DEPT									
Note: ***, **, and * represent significance levels of 1%, 5%, and 10%, respectively.									

Based on the analysis results, it can be observed that the relationship between pet attachment sub-dimensions and the importance placed on traveling with pets is as follows: the pet status dimension has no significant relationship with the importance of traveling with pets, while the general attachment dimension and the interpersonal substitution dimension have a significant positive relationship with the importance of traveling with pets. Specifically, the standardized coefficients are as follows: Beta = 0.08, P = 0.213 for the pet status dimension; Beta = 0.232, P < 0.01 for the general attachment dimension; and Beta = 0.194, P < 0.05 for the interpersonal substitution dimension.

b.Pet Attachment and Willingness to Travel with Pets

In this study, it is assumed that pet attachment positively influences the willingness to travel with pets. In specific dimensions, the higher the pet's status, the greater the willingness of people to travel with their pets; the stronger the interpersonal substitution of pets, the higher the willingness of people to travel with their pets; and the stronger the general attachment, the higher the willingness of people to travel with their pets. Conse-

quently, this section aims to verify the correlation between these two variables and the relationships among various dimensions. Specifically, people's willingness to travel with pets is the dependent variable, and the general attachment, interpersonal substitution, and pet status of pet attachment are the independent variables in the regression analysis. The specific results are shown in the table below:

Based on the above analysis, it can be concluded that the relationship between sub-dimensions of pet attachment and the willingness to travel with pets is as follows:

Table 7: Regression Analysis of Pet Attachment and Willingness to Travel with Pets

Linear Regression Analysis Results, n=260.									
	unstandardized coefficient		standardized coefficient	t	P	VIF	R^2	adjusted R^2	F
	B	standard error	Beta						
constant	1.152	0.523	-	2.204	0.028**	-	0.08	0.069	F=7.378 P=0.000***
secure attachment	0.441	0.185	0.185	2.382	0.018**	1.686			
interpersonal substitution	0.125	0.132	0.077	0.95	0.343	1.831			
pet status	0.12	0.11	0.074	1.093	0.276	1.289			
Dependent Variable:PWT									

Note: ***, **, and * represent significance levels of 1%, 5%, and 10%, respectively.

General Attachment Dimension: There is a significant positive relationship between the general attachment dimension and the willingness to travel with pets (standardized coefficient Beta=0.185, p=0<0.05).Interpersonal Substitution Dimension: The interpersonal substitution dimension does not exhibit a significant relationship with the willingness to travel with pets (standardized coefficient Beta=0.077, p=0.343).Pet Status Dimension: Similarly, the pet status dimension also does not demonstrate a significant relationship with the willingness to travel with pets (standardized coefficient Beta=0.074, p=0.276).In summary, the results indicate that the general attachment dimension of pet attachment significantly positively influences the willingness to travel with pets. However, there is no significant relationship between the interpersonal substitution and pet status dimensions and the willingness to travel with pets.

Conclusion

This study drew upon classic scales from previous research and conducted a questionnaire survey on relevant groups to analyze the impact of pet attachment on the willingness and importance of traveling with pets, and to draw conclusions.Firstly, pet attachment showed no significant differences in terms of gender, age, and occupation, but it exhibited a significant difference in marital status. Willingness to travel with pets showed no significant differences in terms of gender, age, and marital status, but showed significant differences in occupation. The importance of traveling with pets showed no significant differences in terms of gender, age, occupation, and marital status.Secondly, the relationship between pet attachment dimensions and the willingness to travel with pets was as follows: the pet status dimension and interpersonal substitution dimension showed no significant relationship with the willingness to travel with pets, while the general attachment dimension and interpersonal substitution dimension exhibited a significant positive relationship.Lastly, the relationship between pet attachment dimensions and the importance of traveling with pets was as follows: the pet status dimension showed no significant relationship with the importance of traveling with pets, while the general attachment dimension and interpersonal substitution dimension exhibited a significant positive relationship.

Research Limitations

The study examines the factors influencing pet owners' willingness to travel with their pets from the perspective of pet attachment. However, there are several limitations to this study. Firstly, the sample size is relatively small and may not be representative, thus future researchers can expand the sample size and further validate the relationships across different measurement dimensions. Secondly, this study solely focuses on the variable of pet attachment, while there are multiple other variables that influence people's willingness to travel with their pets, such as interpersonal trust and subjective well-being. Subsequent research can incorporate these mediating and moderating variables for a more in-depth analysis.

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