

THE CONSUMPTION, TRAVEL AND LIFESTYLE PREFERENCES OF DOG OWNERS: A COMPREHENSIVE TYPOLOGY

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Abstract

Dog ownership has become a complex socio-economic phenomenon that influences households' consumer decisions, lifestyles and tourism habits. The growing social and economic significance of dog ownership requires a new approach to examining the consumer and lifestyle patterns of dog owners. International trends show that the humanisation of pets is steadily increasing, spending on them is rising, and dog owners are spending more and more on their pets' well-being and are willing to actively involve their dogs in their tourism and leisure activities. Pets are increasingly becoming part of the family and they are in everyday life and consumer decisions. As a result of these changes, dog ownership can no longer be interpreted solely in terms of individual preferences, but as part of complex lifestyle patterns that extend to spending patterns, travel decisions and forms of leisure activity. The aim of the research is to explore these relationships, which can contribute to the development of dog-friendly tourism offerings, service development and targeted marketing strategies.

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1 Introduction

Keeping pets, especially dogs, can be interpreted today not only as a social and cultural phenomenon, but also as an economic one. Dog ownership generates significant consumer activity, the economic impact of which can be seen on several levels: household, business and macroeconomic. In Hungary, there are approximately 2.5–3 million dogs in households [1], which means that more than one-third of the population is directly involved in animal husbandry. An economic approach to dog ownership provides an opportunity to objectively analyse the decisions of owners, the behaviour of market participants and the development trends of the industry. Dog ownership can also be interpreted from an economic perspective, as the totality of pet-related expenses, consumer decisions and services is playing an increasingly important role in the modern economy. Some households view dog ownership is not just a hobby, but as an activity that improves their quality of life, which is associated with significant financial expenditure.

The decisions made by dog owners affect a number of economic factors, from everyday expenses to travel and leisure activities. The aim of this study is to explore the patterns that distinguish dog owners from each other in terms of their spending, travel and leisure habits. The analysis was performed using principal component analysis (PCA) and K-means clustering, which allowed the underlying dimensions to be identified and the respondents to be organised into homogeneous groups.

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The aim of my research is to examine and map the factors that influence the decisions and motivations of pet owners when they take their pets (dogs) on tourist trips or participate in recreational activities. The decision of whether owners involve their dogs in tourist activities is an important issue, as pets can influence the quality of an individual's tourist experience. (e.g. extra costs) More and more dog owners are becoming attached to their pets and owners spend significant amounts of money on them in the form of luxury products and services. My goal is to examine why dog owners keep dogs and what services they use. A further aim is to examine dog-friendly destinations and the publications and marketing communication tools used to promote them.

2 Literature review

The increasingly dominant appearance and presence of dogs in households supports the importance of examining the consumer behaviour of dog owners. Previous researches [2] show that physical education, physical activity and health promotion integrated into the school system and higher education contribute to the development of a health-conscious lifestyle [3, 4]. In the light of these results, it is worth examining whether a similar mechanism could also apply to a dog-friendly lifestyle—regular walks, dog programmes—i.e., dog ownership not only has psychological and social benefits, but can also be considered a structured health promotion activity. Moravec (2018) [5] emphasises that public education and higher education institutions play a key role in promoting the health of young people, particularly through programmes that encourage physical activity. This institutional framework can be well compared to the regular activity patterns created by dog ownership, as daily exercise with a dog is also integrated into the lives of owners in a structured way.

Moravec's later studies show that the impact of physical education and sports activities goes far beyond the development of physical abilities; they also shape health awareness, motivation and attitudes towards an active lifestyle [6,7]. Similar mechanisms also apply to dog ownership: caring for a dog, walking it and interacting with it regularly are all behaviours that support the maintenance of a healthy lifestyle in the long term. Walking a dog, for example, is a chore that provides both physical activity and regularity, making it one of the fundamental pillars of health promotion.

Dog walking, as a form of physical activity, is not only a health practice but also a value-mediating process: certain value preferences among young athletes—such as responsibility, autonomy, and regularity—are more strongly emphasised [8]. Dog ownership mobilises a similar value system: responsible animal husbandry, daily time management, and openness to exercise in nature all reinforce values that are relevant within the theoretical framework of health promotion.

Recent Hungarian research exploring the relationship between well-being and physical activity [9,10,11,12,13] confirm that exercise is not only a health resource but also a psychological and social resource. Using the JD-R model, it has been shown that physical activity reduces stress and increases well-being, especially when incorporated into daily routines [14]. This finding is consistent with international findings on the quality of life-enhancing effects of dog ownership, as walking a dog as a mandatory daily activity serves a similar psychological and lifestyle-enhancing function. The combination of physical activity, value system, motivation and socialisation [15] makes it possible to understand why dog ownership can be considered a complex health-promoting lifestyle.

Meszlényi's (2017) [16] researches show that incorporating structured forms of exercise into everyday life not only has a physical impact, but is also key to developing habits, a sense of duty and health-oriented attitudes [16]. These values can be easily compared to the lifestyle-shaping role of dog ownership, as walking a dog as a daily routine generates stable, regular physical activity and is based on a sense of responsibility [17]. Borbély–Fónai (2016) [17] studies show that the value preferences that determine the lifestyle of young adults (autonomy, self-management, the need for conscious decision-making) are closely related to choices regarding physical activity, healthy lifestyles and recreation. These preferences also affect dog owners in several ways, whose consumption and leisure choices are often centred around the values of responsibility, care, well-being and an active lifestyle.

Tourism and sport, as well as active tourism activities, are closely linked to the spread of health-conscious lifestyles [18,19,20,21,22,23,24,25,56,57,28], and one of the new trend is dog tourism. Travellers are increasingly looking for programmes that offer exercise, relaxation and mental rejuvenation, without having to leave their pets at home. Hiking, running, excursions or even

participating in sporting events with dogs promotes physical activity, health maintenance and experience-based tourism, thus forming a bridge between sports tourism, active tourism and health trends [29]. As a result, active, experience-oriented and health-conscious tourism is becoming an increasingly prominent trend in travel habits, focusing on exercise, nature-based recreation and mental well-being [30,31,32,33,34,35].

Extensive literature from various international sources explores different aspects of dog ownership. The United States is one of the largest nations in terms of dog ownership, with approximately 84.9 million people, or 67% of the population, owning dogs [36]. In 2022, an estimated 17.4 million households (62%) had pets, including dogs, and spent \$235 million annually on pet food. Borbély and Oláh (2021) [37] showed that personality dimensions and value orientations play a decisive role in decisions that require long-term commitment from the individual [37]. Dog ownership, which requires significant responsibility and resource allocation, can be interpreted as an equally value-driven, long-term decision, especially when owners integrate their pets into their tourism, recreation, or lifestyle choices.

A 2025 American study highlights the growing trend of pet owners viewing their animals as family members and being committed to high-quality care, even though nearly half report that unexpected expenses cause significant financial hardship [38,39]. The report shows that dog owners are paying increasing attention to the health and well-being of their pets, which is also reflected in rising expenditure. The work of Zilinyi et al. (2022) [40] who examined the role of bounded rationality and heuristic decision-making in the assessment of athletic performance, provides an important methodological and theoretical basis for understanding the cognitive background of consumer preferences and travel decisions [40]. Their findings show that decision-making is often not the result of rational calculations, but is based on simplifying heuristics. Owners estimate that the average cost of caring for a dog over its lifetime is \$8,000, but research shows that the actual amount is much higher, ranging from \$22,000 to \$60,000. This is a significant increase compared to 2022 figures, when the total cost of dog ownership was estimated at between \$20,000 and \$55,000. There may be several factors behind this increase. On the one hand, modern technological devices such as GPS collars and smart feeders are becoming more widespread, which facilitate responsible pet ownership but also increase expenses [41]. On the other hand, dog owners are placing greater emphasis on preventive healthcare and the importance of regular check-ups and examinations.

Accordingly, spending on dog health insurance (US\$198–313 per year) and wellness programmes (US\$422–701 per year) has also increased. These programmes typically include annual veterinary examinations, vaccinations and various health maintenance services.

Interestingly, Synchrony Financial's figures differ from those published by the North American Pet Health Insurance Association (NAPHIA), which reported that the average annual health insurance premium for dogs was \$749 in 2024. The difference is partly due to different insurance structures and service packages, as well as the fact that owners often underestimate long-term costs.

Overall, dog owners are increasingly viewing their pets' health and well-being as an investment and are willing to spend more on prevention, more convenient care and modern technological solutions [42].

Chen and his colleagues [43] conducted research among dog owners in the United Kingdom, as dogs are the most common pets in British households. The study examined British pet owners' spending on non-essential items such as pet grooming and travel. According to the research findings, spending on these items increased significantly in 2009. Based on the data, British pet owners spend approximately \$6.48 billion annually on their pets, and over the lifetime of a dog, the total expenditure can reach \$19,150 [43].

It is noteworthy that 90% of these families consider their pets to be an integral part of the household [44]. In Europe, the United Kingdom and Spain have a significant dog ownership rate. In the United Kingdom, the number of pet dogs was approximately 8 million in 2008, and 25% of British families had a dog. In addition, 40% of dog owners in the United Kingdom travel with their dogs for leisure and tourism purposes [43]. Similarly, there are more than five million registered dogs in Spain, and an increasing number of individuals are choosing to travel with their pets [44].

A study conducted in Spain and examined the travel habits of Spanish dog owners. According to the study, 93% of Spanish dog owners travel with their dogs and prefer dog-friendly

accommodation. They take an average of 3.95 such trips per year, lasting an average of 4.06 nights (5 days internationally). These travellers spend an average of EUR 72.6 per night, which is 23% more than the average expenditure of other Spanish travellers (EUR 58 per night). These results support and reinforce the growing perception of dogs as family members and the willingness of dog owners to spend money, which could represent positive business opportunities for dog-friendly tourism providers and destinations.

The primary goal of Hung and his colleagues' 2013 [45] study was to explore the factors that determine pet owners' decision-making process when they want to involve their dogs in tourist activities [45]. As the situation of travellers with dogs differs significantly from that of tourists travelling alone or with their families, their decisions are influenced not only by their own preferences and circumstances, but also by the needs and behavioural characteristics of their pets. The presence of dogs can entail a number of restrictions – health, behavioural, logistical or service-related – that can significantly influence the planning and execution of tourism activities. A questionnaire survey was conducted involving 568 Taiwanese dog owners who had previously participated in tourism activities with their pets. The results show that pet-related restrictions – such as a lack of appropriate services, transport difficulties or problems arising from the dog's behaviour – have a negative impact on owners' participation in tourism activities. However, researchers also pointed out that strong emotional attachment and high motivation can significantly mitigate the impact of these constraints. Owners who have a close relationship with their dogs and are committed to travelling together are more likely to use various adaptation strategies, such as modifying their itinerary or seeking out specifically dog-friendly services. These solutions enable them to participate in tourism activities even when faced with significant challenges.

3 Material and method

The research was conducted using a questionnaire method among dog owners. In spring, in 2025 I created the online questionnaire and distributed it through several domestic dog owner community groups and email inquiries. Completing the questionnaire was voluntary and anonymous; the names or other personal identifiers of the respondents were not recorded. The target group of the research was dog owners aged 18 or older and who live in Hungary.

I used both closed and open questions in the questionnaire, and in the case of closed questions, I helped respondents with predefined answer categories. The main topics of the questions were as follows:

1. Sociodemographic data: age, gender, place of residence, marital status, household size.
2. Characteristics related to dog ownership: breed, age, method of acquisition (adoption, breeder), relationship between the dog and its owner.
3. Spending habits: regular expenses on household supplies, food, health care, veterinary care, as well as the costs of dog-related travel and activities.
4. Leisure and recreational activities: cultural, sporting, nature-based, creative and digital pastimes.
5. Travelling habits: frequency of travelling with a dog, motivations for choosing destinations, service preferences.
6. Mental and health aspects related to research objectives: the role of dogs in the well-being and quality of life of their owners.

The sample consisted of 652 individuals who completed the questionnaire in a fully evaluable manner. The adequate sample size allowed for quantitative analyses, including principal component analysis (PCA) to explore the dimensions of spending, travel and leisure preferences, as well as k-means clustering to classify dog owners into typological groups.

During the analysis, variables were treated according to their type: quantitative variables (e.g., spending amounts) were treated as continuous, while categorical variables (e.g., dog breed, travel motivation) were treated as ordinal or nominal variables. For clustering, I chose a 4-cluster solution, which yielded stable results both statistically and interpretatively, with the ANOVA test used to check for significant differences between clusters.

The advantage of the questionnaire approach is that a large sample could be included in a short period of time, but at the same time, self-reported data collection carries the possibility of bias (e.g., social desirability effect, overestimation or underestimation of spending data), which I took into account when interpreting the research.

In our questionnaire-based research, I present the results of 652 people who keep dogs as pets. In terms of the distribution of the sample, 182 men (27.9%) and 470 women (72.1%) completed my questionnaire. More than half of the respondents are in the 18-55 age group. 22.7% of respondents live in villages, 41.5% live in towns, and the rest live in the capital (16.1%) or county seats (19.6%).

4 Results

Of the respondents participating in the survey, 26.3% (172 people) owned mixed-breed dogs, while the majority owned purebred dogs. Among purebred dogs, the border collie proved to be the most popular breed, mentioned by 13.8% (90 people) of respondents. Corgis and German shepherds followed in popularity, suggesting that medium-sized, active, trainable and family-friendly dogs were the most popular among respondents. The distribution of the dog breeds is shown in Table 1.

Table 1. Distribution of dog breeds in the sample

<i>Dog breed type</i>	<i>Number of respondents (n)</i>	<i>Percentage (%)</i>	<i>Notes</i>
Mixed breed	172	26,3%	Dog adopted from an animal shelter
Border collie	90	13,8%	Most popular breed; intelligent, active, family- and child-friendly
Corgi	78	12%	Active, sociable, well adapted to urban living
German Shepherd	70	10,8%	Classic working dog with strong guarding and protective abilities
Other purebred dogs	243	37,1%	Smaller proportions of terriers, retrievers, spaniels, etc.
Total	653	100%	

The table shows that the vast majority of respondents chose their dog consciously, primarily on the basis of functional and emotional considerations. The high proportion of border collies is due to the breed's high intelligence and versatility in sports, which suits the preferences of young, active owners with an urban lifestyle.

The high level of interest in purebred dogs also reflects the expansion of the market supply, as breeders and service providers are placing increasing emphasis on meeting breed-specific needs.

Based on the PCA results, three main dimensions were identified:

1. Spending preferences – the structure of dog-related home, health, travel and veterinary expenses;
2. Travel preferences – location, cost and experience-oriented factors in dog-related travel;
3. Leisure preferences – grouping of cultural, sporting, creative and recreational activities.

I considered principal component analysis (PCA) necessary in order to reduce the dimensions of my data set and create a clearer structure among the variables. The aim of the analysis was to identify the underlying factors that determine respondents' spending, travel and leisure preferences. Due to the large number of variables, this method helped me to use more easily interpretable data during clustering, while preserving the essence of the original information.

When selecting components, I focused on factors with eigenvalues greater than 1.0. This ensured that the retained components explained sufficient variance to remain relevant to the analysis.

When selecting the variables belonging to the components, I used the rotated factor structure, which I optimised with Varimax rotation. I assigned each variable to the component for which it showed the highest factor weight. This procedure ensured that the variables best fit the meaning of the given component and clearly reflected the underlying factors. When interpreting the factor weights (loading values), I took into account that they should reach a minimum value of 0.4, so only those variables that are strongly related to the given dimension were included. With this approach, I ensured that each component represents a coherent and easily interpretable group of variables.

As a result of the PCA, I identified the following dimensions:

1. Spending preferences

I organised spending habits into four main components (Table 2), separating home, holiday and healthcare expenses, as well as veterinary costs. This allowed me to gain a clear picture of the respondents' financial priorities in terms of their spending on their dogs.

Table 2. Spending habits explained by four components

<i>Component</i>	<i>Content</i>	<i>Key variables</i>
Home-related expenses	Purchase of regular and supplementary products	Collar, leash, dog bed, toys, grooming products
Vacation-related expenses	Costs of traveling with a dog	Dog accommodation, food, leisure and recreational activities
Health and nutrition	Nutrition and preventive health-related expenses	Dog food, vitamins
Veterinary expenses	Annual costs of healthcare services	Veterinary check-ups, treatments

2. Travel preferences

To analyse travel habits, I divided the variables into four main components, covering factors influencing location choice, preferred destinations, costs and accessibility, and individual preferences. This analysis helped to understand what factors guide dog owners when travelling.

I divided travelling habits into four components (Table 3):

Table 3. Travelling habits explained by four components

<i>Component</i>	<i>Content</i>
Location selection factors	proximity to nature, importance of dog-friendly services and programmes
Preferred destinations	dominance of waterfront, forest, field and mountain areas
Cost and accessibility	the role of affordability and proximity
Individual preferences	preference for urban and resort environments

The results showed that the majority of dog owners prefer destinations close to nature, while the availability and price of services remain a decisive factor in their decision-making.

3. Leisure preferences

I identified six distinct components for leisure activities, covering cultural, digital, outdoor, sporting, nature-based and creative pastimes. This ensured that the differences between individual leisure activities could be clearly interpreted in subsequent analyses. I considered these components important because they provide a comprehensive picture of the respondents' behaviour patterns, while allowing for logical and efficient cluster analysis. This method not only helped to structure the data, but also contributed to a deeper insight into the habits and preferences of dog owners.

The leisure dimensions cover six main areas of activity:

- Cultural and social (theatre, concerts, socialising with friends);
- Digital and home (internet use, social media, watching films);
- Outdoor and adventure (hunting, fishing, motorcycling);
- Sport and active lifestyle (regular exercise, sporting events);
- Recreational and nature-based (excursions, reading, meditation);
- Creative and crafts (gardening, DIY, playing music).

The leisure behaviour of respondents was strongly correlated with the type of dog ownership and the activity level of owners, which was confirmed by our previous research [46].

Cluster analysis

I used k-means clustering to identify hidden patterns in dog owners' spending, travel and leisure preferences and divide them into homogeneous groups. This method is particularly effective because my data contain continuous and ordinal variables that allow for distance-based grouping.

The cluster analysis identified four distinct types of dog owners (Table 4): minimalists, average spenders, nature lovers and active owners, and high spenders with a social orientation. The groups clearly differ in terms of the intensity of their dog-related spending, travel decisions, leisure activities, and lifestyle orientations.

I chose the 4-cluster solution because it seemed the most interpretable from both a statistical and practical point of view. Based on the ANOVA results, there were significant differences between the clusters on several important variables, confirming the interpretability of the groups. The solution showed sufficiently differentiated and stable patterns in the behaviour and preferences of dog owners.

Table 4. Names, descriptions and percentage of cluster groups

Cluster	Description	Percentage (%)
1. Minimalist, low-spending dog owners	Minimal monthly expenses, limited activity, infrequent travel	30
2. Average-spending, reserved owners	Moderate spending, primarily home-based leisure, digital focus	24
3. Nature-loving, active dog owners	Medium-level expenses, high activity levels, dog-friendly hiking and outdoor program	26
4. Luxury-spending, social dog owners	High expenditures, strong social and cultural engagement, dog-friendly travel	20

1. Minimalist, low-spending dog owners

This cluster typically has very low monthly expenses for dog-related products, such as accessories, beds and dog toys (on average, they fall into the "I don't spend" category). They also have minimal expenses when travelling and are less active in leisure activities, rarely participating in active leisure activities. In their case, dog ownership is more functional than a lifestyle choice.

2. Average-spending, reserved owners

Those in this group have balanced but generally lower monthly spending on dog-related costs, such as food supplements and medical products (category "under £50"). Their leisure activities are mainly home-based, such as using the internet and watching television, while they do not place significant emphasis on travel and dog-related activities.

3. Nature-loving, active dog owners

This cluster is known for its active leisure activities. Members of this cluster prefer spending time in nature and sharing experiences with their dogs. They often choose excursion destinations rich in natural features, such as forests, waterfronts or fields (on average, the "very typical" category). Their monthly spending is moderate, for example on treats and medicinal products (category "5,000-10,000 HUF"). They enjoy participating in active leisure activities such as walking, hiking and other dog-related programmes. This type can be identified with the "dog lifestyle" segment, which is committed to recreation and health maintenance.

4. Luxury-spending, social dog owners

Members of the fourth cluster have high monthly expenses related to dog ownership, especially in terms of accessories, dog toys and travel supplies (on average in the "15,000-30,000 HUF" category). Their leisure activities include cultural and social programmes such as concerts and theatre visits, and dog-friendly accommodation and luxury programmes also play a significant role in their travel preferences.

These groups are clearly distinguishable and interpretable, which supports the validity of the 4-cluster solution. The high willingness to spend and the preference for cultural and social programmes clearly indicate that for some people, dog ownership is also a status symbol. Among the members of this group, the demand for premium products and dog-friendly services is the strongest, suggesting that dogs are not just pets, but can also be a means of expressing their social status.

5 Discussion

The results of the research provide a comprehensive picture of dog owners' preferences, consumption patterns and lifestyles, particularly with regard to spending, travel and leisure habits. The data clearly shows that there is a close relationship between the choice of dog breed, the lifestyle of the owners and the expenses associated with keeping a dog.

The high proportion of purebred dogs (73.7%) suggests that respondents tend to choose their dogs consciously and purposefully. The outstanding popularity of border collies, corgis and German shepherds indicates a preference for medium-sized, active, intelligent and trainable breeds. This is in line with international trends, according to which urban and active owners primarily choose dog breeds that can adapt to a dynamic everyday life and at the same time function well in a family environment [47, 48]. Although the proportion of mixed-breed dogs is lower at 26.3%, it clearly shows an increase in the willingness to adopt, reflecting sensitivity to animal welfare and sustainability. This trend is in line with the trend towards responsible pet ownership observed in European societies, where ethical and social considerations are playing an increasingly important role in pet ownership.

The results of the principal component analysis (PCA) revealed three distinct dimensions: (1) spending, (2) travel and (3) leisure preferences. Based on spending patterns, it can be concluded that dog owners' decisions are influenced not only by income level, but also by lifestyle and emotional attachment. The high importance of household expenses and health-related spending indicates that dog ownership is not merely practical, but is also understood as a caring, family role [49]. Veterinary expenses appeared as a relatively stable and universal expense item, reflecting financial awareness of responsible pet ownership.

An analysis of travel preferences revealed that the majority of respondents prefer nature-oriented, dog-friendly locations where the presence of animals is not a limiting factor but a source of shared experiences. The connection to nature serves not only a recreational but also a psychological function, as leisure activities with dogs have been shown to reduce stress and strengthen social bonds [50,51]. The six components of leisure preferences clearly indicated that there are marked differences in lifestyle among dog owners. Active, outdoor leisure activities are more often associated with a higher willingness to spend and more intensive travel activity, while home- and digitally-oriented respondents tend to prefer passive forms of leisure.

The differences between the clusters clearly confirm that dog ownership is a socially and economically heterogeneous phenomenon that fits into different lifestyles. This typology can provide a basis for tourism service providers, pet food manufacturers and leisure programme organisers to develop targeted offers and marketing strategies [52].

Significance and limitations of the research

One of the most important findings of the study is that it revealed the structure of dog owners' consumption and leisure behaviour and highlighted the lifestyle-shaping role of pet ownership. However, the limitations of the research include the possibility of bias arising from the self-reported questionnaire and the fact that the sample contained a higher proportion of urban, active respondents. Future research should involve greater participation from rural and older age groups, as well as longitudinal studies to map changing trends.

The research also points to the fact that the future of dog ownership will be characterised by increasing humanisation, recreational functions and a role related to the quality of life of owners, which will open up new opportunities for the tourism and economic sectors.

6 Conclusion

The results of the research highlight that dog ownership today goes beyond the traditional framework of pet ownership: it appears as a complex lifestyle and value choice that is closely related to owners' consumption, leisure and travel habits. The dominance of purebred dogs and the outstanding popularity of border collies reflect a conscious, active and family-friendly lifestyle. The four groups identified using PCA and cluster analysis – minimalists, average spenders, nature-loving actives and luxury-spending social dog owners – clearly show that dog owners have a wide range of motivations, values and lifestyles.

The research contributes to a better understanding of dog owners' decision-making patterns, particularly in the areas of tourism, leisure and consumption. Its findings can also be used in the development of dog-friendly services, accommodation and recreational programmes, as they highlight the needs and preferences of different target groups. Future studies should analyse the social and psychological aspects of dog ownership in more detail, such as the effects of emotional attachment and animal ownership on mental health. It can be concluded that the behaviour and

lifestyle of dog owners reflect the changing values of modern societies, where pet ownership has become an integral part of a responsible, active and experience-based lifestyle.

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