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Perceived Relationships and the Costs and Benefits of Dog Ownership in Czech Homeless and Non-Homeless People

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ABSTRACT

Dog ownership is connected to several psychological and physical health benefits, but it also comes with costs and consequences in terms of providing suitable accommodation or leaving the dog while going to work, hospital, or traveling on holiday. Although many people think that homeless individuals should not have a dog, dog ownership among homeless communities is quite popular and beneficial for them. In this study, we compared the perceived costs and benefits of dog ownership (based on a Czech version of the Monash Dog Owner Relationship Scale) among people who had and did not have permanent housing. In total, 1,056 people participated in the study, of which 955 had permanent housing and 101 did not. After completing the questionnaire, participants experiencing homelessness responded to open-ended questions about their life with a dog on the street. No statistically significant differences emerged in the Owner–Dog Interaction subscale ($p=0.289$), and Perceived Costs subscale ($p=0.251$). However, for the Perceived Emotional Closeness subscale, there was a statistically significant difference between the groups, ($Z=2.079$, $p=0.038$): homeless dog owners reported higher emotional closeness to their dogs. These results underline the importance of dog companionship for homeless individuals. Although both groups were likely to regard the dog as a part of the family, for a person facing homelessness, their dog may be the only family member. Homeless dog owners often refuse accommodation options or jobs when dogs are not permitted to accompany them. To address this complicated scenario, further research into the One Health approach is required.

KEYWORDS

Cost–benefit; dog; homeless; human–animal interaction; human–dog relationship; MDORS

The shared history of humans and dogs began approximately 14,000 years ago. There is no other animal with whom humans share such a strong relationship (Udell & Wynne, 2008). Even though this relationship has evolved significantly over time, dogs still play an important

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role in people's lives today (Boya et al., 2012; González-Ramírez, 2019). They enrich our lives in numerous ways, providing emotional and psychological stability (Aragunde-Kohl et al., 2020), facilitating the development of social intelligence, enhancing social interactions, and assisting in stress management (Beetz et al., 2012; Howe & Easterbrook, 2018; Scanlon, Hobson-West, et al., 2021; Serpell, 1991). Consequently, many households in different cultures and societies keep dogs. According to a global survey conducted by Statistica.com in 2022, almost half of the households in some European countries have at least one dog (Bedford, 2023) – for example, Poland (49%), Romania (43%), and the Czech Republic (42%) – whereas in the United States, approximately 45% of households have a dog (Nolen, 2022).

While there may be various reasons why individuals choose to have a dog, the most common reason is for social companionship (Beetz et al., 2012; Meyer & Forkman, 2014). The companionship of a dog is treasured not only by those who live in homes but also by those without a permanent home. Kerman et al. (2019) found that 1 out of 10 homeless persons owns a dog. Homelessness is a significant disadvantage for individuals within the human population (Bassuk et al., 1984). Fowler et al. (2019) state that homeless individuals are those who suffer from a lack of stable housing and who often have to use public or private shelters. The issue of homelessness constitutes a grave social problem that affects millions of people worldwide. It presents a multitude of challenges, such as the loss of a home, inadequate social support, and in many cases, concurrent health issues (Salize et al., 2001; Schreiter et al., 2017; Torchalla et al., 2004). In the Czech Republic, various stages of homelessness are identifiable, ranging from living on the streets to inhabiting unstable living accommodation with poor social connections and no private space (Hradecký et al., 2007). According to Develtere (2022), there are approximately 700,000 homeless individuals in the European Union. In the Czech Republic, the population of people experiencing homelessness numbered 20,600 in 2019, with most residing in Prague and the Moravian-Silesian Region (Veverková et al., 2020).

Homeless individuals vary in terms of age, ethnicity, and family background (Institute of Medicine, 1988). Various factors contribute to homelessness, with a significant number of individuals being compelled onto the streets due to unstable family environments and incidents of physical or sexual abuse or other tragedies (Bebbington et al., 2004; Martijn & Sharpe, 2006; Shelton, 2015). Various factors associated with street life contribute to poor physical and mental health, including lack of education, problematic social connections, and criminal behavior (Kidd, 2007; Spauwen et al., 2006). Martens (2001) reported higher prevalence of mental illnesses in homeless individuals. Among these conditions, the most prevalent are anxiety disorders, affective disorders, depression, schizophrenia, and psychotic illnesses (Fichter & Quadflieg, 2001, 2006; Längle et al., 2005; Salize et al., 2001; Torchalla et al., 2004; Völm et al., 2004).

Drugs and alcohol abuse are common issues among people experiencing homelessness (Goering et al., 2002; Schreiter et al., 2017). In the Czech Republic, 31% of homeless individuals report daily alcohol consumption, with fewer reporting drug use (approximately 10%). Individuals may use multiple substances, as 75% reported that they did not use any drugs (Veverková et al., 2020).

For people facing homelessness, a dog can be a valuable aid in reducing feelings of loneliness and depression, as well as providing physical contact (Rhoades et al., 2015). The presence of a dog can serve as a means of initiating communication with others

and can facilitate initial social encounters (McNicholas & Collis, 2000), especially with the “normal” population (Kidd & Kidd, 1994). Research by Irvine et al. (2012) revealed that when a person experiencing homelessness is accompanied by a dog, individuals are more likely to offer assistance, often because of their desire to help the animal. Additionally, owning a dog may result in higher levels of respect and dignity for homeless individuals (Aliment et al., 2016).

The past few decades have been characterized by an increase in the use of assistance dogs for people with psychiatric problems (Foltin & Glenk, 2023) and animal-assisted interventions for drug-addicted patients (Kelly & Cozzolino, 2015; Kosteniuk & Dell, 2020). Similarly, emotional support dogs (ESDs) may provide benefits in the daily lives of people experiencing mental health or emotional challenges (Foltin & Glenk, 2023). In a sample of adult dog owners living in the UK, perceived relationship strength as well as emotional support and companionship were linked with higher prevalence of mental health issues such as depression or anxiety (Merkouri et al., 2022). Focusing on training and taking care of the dog can help drug-addicted individuals to gain some self-confidence and to rebuild their life (Walsh, 2009).

Previous data suggest that dog owners experiencing homelessness are willing to reduce the consumption of addictive substances to be able to properly take care of their dog (Howe & Easterbrook, 2018). According to the findings of Irvine et al. (2012), permanently housed people commonly believe that homeless individuals are incapable of providing proper care for a dog. Conversely, homeless people share the same sentiment about working individuals. They argue that the separation from a dog during work time (i.e., the amount of hours) is often too long, indicating a lack of adequate time devoted to the pet (Irvine, 2013b; Irvine et al., 2012).

Traditionally, dogs are perceived in four distinct ways: as an object with financial value, as a tool to be used, as a being who can be relied upon, or as a respected friend (Dotson & Hyatt, 2008). At present, in modern western societies, dogs are predominantly viewed as friends (Odendaal & Lehmann, 2000), often providing more reliable and consistent relationships than those from human-to-human interactions (Brickel, 1986; Dotson & Hyatt, 2008). Interestingly, individuals exhibiting high scores on attitudes to pets may prefer a pet over a person (Aumer et al., 2022). Homeless individuals state that their dogs provide them with a sense of unconditional love and acceptance, social support, companionship, protection, and safety (Howe & Easterbrook, 2018; Irvine et al., 2012; Rhoades et al., 2015; Scanlon, Hobson-West, et al., 2021; Singer et al., 1995). Dogs also exhibit loyalty (Singer et al., 1995) and are often considered by homeless individuals to be their closest and only family member (Bender et al., 2007).

However, there are various costs associated with owning a dog for individuals experiencing homelessness. Owning a dog poses challenges to resuming everyday life, such as restricted mobility, acquiring basic necessities, and securing employment or housing (Howe & Easterbrook, 2018; Kerman et al., 2020; Scanlon, Hobson-West, et al., 2021). A survey conducted among homeless individuals in North California found that approximately 93% would decline housing opportunities if they were not allowed to be accompanied by their dogs (Rhoades et al., 2015). In the Czech Republic, only a limited number of shelters permit dogs to accompany those making use of the shelter. If dogs are allowed, they either have to stay in a kennel (Smlsal, 2019) or with the owner in a

small artificial igloo (Plavecký, 2023). This limited provision of person-plus-dog shelters is mirrored in other European countries, including the UK, where fewer than half of the shelters are dog-friendly (Scanlon, McBride, et al., 2021). Consequently, numerous homeless individuals are forced to make the excruciating choice between accepting accommodation or parting with their beloved companion. Many refuse the accommodation, thereby perpetuating the cycle of homelessness (Singer et al., 1995). This issue is emphasized by the fact that they clearly show more empathy for and are more attached to their dogs than the permanently housed population (Taylor et al., 2004).

Taylor et al. (2004) found that homeless dog owners use medical facilities less than homeless non-dog owners. This does not necessarily mean they are healthier overall, but rather that many homeless individuals decline medical assistance out of fear of potentially losing their dog (Rhoades et al., 2015). The significance of prioritizing a dog's welfare over one's own was also noted in earlier research by Kidd and Kidd (1994).

Even individuals with housing experience difficulties in finding a pet-friendly place to live. The responsibility of caring for a pet while working full-time results in a decreased ability to travel, particularly among young adults (Graham et al., 2019). Nevertheless, the majority of studies demonstrate the self-reported positive effects of owning a dog, such as improved mental health (McNicholas et al., 2005), enhanced social interaction (McNicholas & Collis, 2000), the taking of responsibility, the establishment of life stability (Graham et al., 2019), and the better management of stress (Allen, 2002). Dog ownership can positively impact the release of hormones and neurotransmitters, including oxytocin, dopamine, and prolactin, as well as reduce levels of cortisol during dog-owner interactions, as demonstrated by Odendaal and Lehmann (2000).

As stated previously, owning a dog can result in both costs and benefits for individuals, whether they have a home or not. However, previous research has primarily compared sectors within homeless populations, with Kidd and Kidd (1994) and Taylor et al. (2004) assessing the attachment bond of homeless people to their dogs. To the best of our knowledge, nobody has examined the costs and benefits of dog ownership for those with and without permanent housing. To further investigate this topic, we compared the costs and benefits of the relationship between owners and their dogs using the Monash Dog Owner Relationship Scale (MDORS), surveying both cohorts.

Methods

Ethical Review

Permission to perform this study was obtained from the Ethics Committee of the University of Life Sciences Prague. Reference number 11/2022.

Participants

Inclusion criteria for this study were that the participants had to be a minimum age of 18 years and be current owners of a dog. Two groups of participants were compared: people with permanent housing and people without. People experiencing homelessness were mostly recruited during dog vaccination events in Prague in cooperation with non-

profit organizations (in Prague): *Psí život* [Dogs life] (September 2021, April 2021, September 2022); in Brno: *Můj pes a já* [My dog and me] in cooperation with *Veterináři bez hranic* [Vets without borders] (September 2022); in Liberec, in cooperation with the director of ZOO; *Liberec* (November 2022) – dogs of homeless people were vaccinated for free. On these occasions, homeless individuals were invited to share their experiences and participate in the research project. The people experiencing homelessness ($n = 101$) who participated in the survey were approached while they waited in the queue to get their dog vaccinated or post vaccination. In addition, another 10 participants were approached and asked to participate in the survey by the study team on the main streets of large cities (e.g., Prague, Brno) in the Czech Republic. We received informed consent from homeless participants following an explanation of the purpose of the study. All were given the choice whether they wanted to complete the questionnaire by themselves or whether they preferred that an interviewer read it for them.

People with permanent housing were mostly recruited via a range of online social media platforms (e.g., Facebook, Instagram), dog training schools, and veterinary surgeries. For the online version of the questionnaire, the platform *Survio.com* was used; 98% of the questionnaires were completed via this online platform and primarily by people with a permanent home.

Materials

The instrument used was a standardized, back-translated Czech-language version of the MDORS (Dwyer et al., 2006). Both versions are available in the online supplemental materials (Tables S3 and S4).

The first part of the MDORS seeks to obtain demographic data and determine the characteristics of the owner and the dog. The questionnaire is then divided into three subscales related to different aspects of the human–dog relationship: higher scores for each subscale mean, respectively, higher levels of Owner–Dog Interaction (9 items), greater Perceived Emotional Closeness (10 items), and lower Perceived Costs (9 items) (Dwyer et al., 2006). Participants responded to the questions on a Lickert scale (1–5). The higher the score, the stronger the relationship with the dog, except for the reverse-scored questions.

Two questions were slightly modified for the purpose of this study. Question 17, “How often do you take your dog in the car?” was changed to “How often do you take your dog on public transport?” because homeless people generally do not own a car. In addition, Question 26, “How often do you have your dog with you while relaxing, i.e., watching TV?” was changed to “How often do you have your dog with you while relaxing, spending free time?” because only a small number of homeless people have the opportunity to watch television.

After completion of the MDORS, the people facing homelessness were asked whether they would like to share their personal experiences in order to explore the circumstances under which they live with a dog. All remarks that were spontaneously given while completing the questionnaire were noted. In addition, if a person agreed to participate in the interview, the authors explained that it was on a completely voluntary and anonymous basis. Thus, all answers to the open-ended interview question “Is there anything you

would like to share with us regarding the benefits and challenges of dog ownership based on your experience?" were noted. The interviews were conducted in Czech. Hand-written notes were taken by the study team, which were later translated into English and categorized into three dimensions: (1) Experiences of accommodation and housing, (2) Reasons for acquiring a dog, (3) Living on the streets with a dog. This part of the study was of an exploratory nature and based on convenience sampling. The participants could choose not to respond, or they could withdraw from the questionnaire at any time and without giving a reason, regardless of its form (paper, online). Similarly, they were given the option to freely take part in the interview, and they could also spontaneously withdraw from it at any time and without giving a reason.

Data Analysis

The basic statistical parameters were estimated based on descriptive statistics – mean and standard deviation. For categorical data, absolute and relative frequencies were used. A total score and scores for each of the MDORS subscales were calculated according to Dwyer et al. (2006). As the data were not normally distributed, the non-parametric Mann–Whitney *U* test was used to compare the scores of the two groups. The significance level (α) was set at 0.05. Tibco Statistica 14.0 software was used to analyze the data.

Results

Demographic Data

In total, 1,056 respondents participated in the survey conducted between September 2021 and November 2022. Of these, 886 were female and 170 were male (833 women and 122 men with permanent housing; 53 women and 48 men without permanent housing). The most frequently represented age groups among those people without any home were 36–45 years old (42.6%), 26–35 years old (22.8%), and 46–55 years old (19.8%). For those with permanent housing, the age groups were more evenly distributed: 26–35 years (34.2%); 18–25 years (28.7%); and 36–45 years (17.5%).

Of the study participants without a home, 58.4% had a male dog (6.9% neutered) and 41.6% had a female dog (14.9% neutered). Of those participants with permanent housing, 48.2% had a male dog (11.2% neutered) and 51.7% had a female dog (23.2% neutered). In addition, 68% of homeless participants and 77% of those with permanent housing took care of the dog themselves.

The biggest difference between the studied groups was that the homeless individuals mostly owned mixed-breed dogs (84%); for those with permanent housing only 34.9% had mixed-breed dogs. The most popular dog breeds among those with permanent housing were the Border Collie (6%) and German Shepherd (4.6%).

The studied groups also differed in terms of where they acquired their dog: people with permanent housing mostly acquired their dogs from a breeder (66.1%) or shelter (12.3%), compared with homeless people, who stated they obtained their dog from a friend or relative (54.5%), and just a minority from a breeder or shelter.

Relationship With the Dog

No statistically significant difference emerged for the Owner–Dog Interaction subscale ($p = 0.289$), with the Perceived Costs subscale proving equally inconclusive ($p = 0.251$). However, scores on the Perceived Emotional Closeness subscale were statistically significant different between the groups, ($Z = 2.079, p = 0.038$). A non-significant statistical trend was observed in the sum of all domains ($Z = 1.872, p = 0.061$). The mean values and

Table 1. Responses of homeless people and those with permanent housing to the Monash dog owner relationship scale (mean scores and *SDs*).

	Homeless people (<i>n</i> = 101)			People with permanent housing (<i>n</i> = 955)			Mean difference
	Sum	<i>M</i>	<i>SD</i>	Sum	<i>M</i>	<i>SD</i>	
Owner–Dog Interaction subscale							
How often do you kiss your dog?	491	4.86	0.62	4190	4.39	1.27	0.47
How often do you play games with your dog?	496	4.91	0.35	4593	4.81	0.55	0.1
How often do you take your dog to visit people?	374	3.70	1.63	3140	3.29	1.49	0.41
How often do you buy your dog presents?	298	2.95	1.31	2235	2.34	0.88	0.61
How often do you give your dog treats?	453	4.49	0.82	4390	4.60	0.79	−0.11
How often do you take your dog on public transport?	419	4.15	1.22	2751	2.88	1.31	1.27
How often do you groom your dog?	251	2.49	1.38	2610	2.73	1.11	−0.24
How often do you hug your dog?	499	4.94	0.28	4486	4.70	0.84	0.24
How often do you have your dog with you while relaxing, spending free time?	500	4.95	0.22	4594	4.81	0.56	0.14
Total		4.16	1.33		3.84	1.40	0.32
Emotional Closeness subscale							
My dog helps me get through tough times.	443	4.39	1.03	4151	4.35	0.85	0.04
My dog is there whenever I need to be comforted.	467	4.62	0.79	4107	4.30	0.85	0.32
If everyone else left me, my dog would still be there for me.	488	4.83	0.63	4428	4.64	0.65	0.19
I would like to have my dog near me all the time.	487	4.82	0.46	4149	4.34	0.82	0.48
My dog provides me with constant companionship.	487	4.82	0.59	4076	4.27	0.90	0.55
How often do you tell your dog things you don't tell anyone else?	401	3.97	1.47	3263	3.42	1.60	0.55
My dog is constantly attentive to me.	470	4.65	0.78	3977	4.16	0.90	0.49
How traumatic do you think it will be for you when your dog dies?	495	4.90	0.30	4500	4.71	0.60	0.19
My dog gives me a reason to get up in the morning.	429	4.25	1.13	3923	4.11	0.96	0.14
I wish my dog and I never had to be apart.	489	4.84	0.52	4322	4.53	0.77	0.31
Total		4.61	0.89		4.28	0.99	0.33
Perceived Costs subscale							
How often do you feel that looking after your dog is a chore?	423	4.19	1.21	3790	3.97	1.23	0.22
It is annoying that I sometimes have to change my plans because of my dog.	421	4.17	1.13	3746	3.92	0.91	0.25
How often does your dog stop you doing things you want to?	456	4.51	0.96	4136	4.33	0.90	0.18
There are major aspects of owning a dog I don't like.	360	3.56	1.40	3172	3.32	1.12	0.24
It bothers me that my dog stops me doing things I enjoyed doing before I owned it.	415	4.11	1.28	3977	4.16	0.84	−0.05
My dog costs too much money.	401	3.97	1.33	2735	2.86	1.16	1.11
My dog makes too much mess.	367	3.63	1.35	3115	3.26	1.14	0.37
How often do you feel that having a dog is more trouble than it is worth?	461	4.56	1.00	4438	4.65	0.77	−0.09
How hard is it to look after your dog?	394	3.90	1.12	2906	3.04	0.85	0.86
Total		4.07	1.25		3.72	1.16	0.35

Note: Possible scores range from 1 to 5.

standard deviations are presented in [Table 1](#). Relative response rates of the participants to each question are presented in Table S1 in the supplemental materials.

Qualitative Interviews

A semi-structured interview based on open-ended questions was conducted to determine the perceptions of homeless individuals with regards to owning a dog. The subsequent analysis revealed three themes: (1) Experiences of accommodation and housing; (2) Reasons for acquiring a dog; and (3) Living on the streets with a dog. For each, illustrative quotes have been selected.

Experiences of Accommodation and Housing

... (I live) ... in a container dwelling next to a landfill, where I work and can keep a dog.

... I beg because I don't want to work. The tent is enough for me over the winter and the dogs keep me warm.

... I have a small dog and used the night shelter, but I didn't want to leave my dog in the kennel because he then suffers from separation distress.

Reasons for Acquiring a Dog

... I didn't really want a dog but found a stray puppy. I wanted to give it to a shelter but ended up keeping it, thinking he'd at least have a partner.

... The two dogs found us – one is retired assistant intervention dog that was not wanted because he started to be aggressive.

... I got these two young dogs with my partner when we lived in an apartment, but then he left me with the dogs ... I know life would be easier without them, but my dogs would defend me if someone tried to rape me when I am in the tent.

Living on the Streets With a Dog

... People with homes may have more obedient, trained dogs, but the dogs actually suffer all their lives because they have to wait at home.

... I have a trained dog, so he is unleashed. I don't go to work because I wouldn't want to. That is why I am begging.

... I am bothered by society's view that every homeless person with a dog is a beggar, when many of them have part-time jobs.

A detailed list of quotes can be found in the online supplemental materials (Table S2). The complete anonymized transcripts for each participant will be provided upon request.

Discussion

The main aim of this study was to compare two populations of dog owners, namely homeless individuals and people with permanent housing, regarding the perceived costs and benefits of dog ownership and their relationship with their dogs. The most important finding was that homeless dog owners rated their perceived emotional closeness to their dog significantly higher than owners with permanent housing. Most of the dog owners experiencing homelessness regarded their dog as a family member (Walsh, 2009). Not surprisingly, the connection between owners and their dogs when they

both are living on the streets appears stronger, which has been previously described as similar to kinship (Scanlon, Hobson-West, et al., 2021). For many homeless people, the bond with their dog may therefore be closer than the average pet-owner relationship (Brewbaker, 2012), with it sometimes being the only stable relationship in their life (Kidd & Kidd, 1994). Although our study purpose was novel in that we compared the costs and benefits of the relationship with a dog in two populations with different housing conditions, our results are in agreement with previous studies that claim there is a higher emotional attachment to pets in homeless populations than in housed populations (Kidd & Kidd, 1994; Singer et al., 1995; Taylor et al., 2004).

According to Rullán-Oliver et al. (2023), emotional support is the most important benefit provided by dogs to homeless owners, who mostly live alone. In our study, homeless people scored several questions on emotional closeness significantly higher compared with those people with permanent housing. The data as reflected by the MDORS revealed some interesting insights regarding the following items: "I would like to have my dog near me all the time," "My dog is constantly attentive to me," "How often do you tell your dog things you don't tell anyone else?" and "My dog provides me with constant companionship." The answers indicate that the dog is an important friend to them, one with whom they can share their stories. It has been proposed that this emotional closeness is partly regulated by oxytocinergic pathways (Murata et al., 2022). In fact, peripheral oxytocin rises in affiliate human-dog encounters (Odendaal & Meintjes, 2003) and can even be stimulated by gaze (Nagasawa et al., 2015).

Loneliness is a common problem among homeless people that can be eased by a dog, thereby helping them to cope with their feelings of solitude (Rew, 2000). This in turn leads to reduced symptoms of depression (Lem et al., 2016; Rhoades et al., 2015) and suicidal tendencies (Irvine, 2013a). However, dog loss has been related to increased suicidal tendencies among homeless dog owners (Kerman et al., 2020). In our study, all homeless respondents reported hypothetical trauma would occur when faced with the death of their dog, whereas those respondents with permanent housing rated the question less strongly. However, previous studies on housed populations have shown that dog owners experience a considerable amount of grief after losing their pet (Cohen, 2002; Walsh, 2009).

It seems that people with permanent housing, similarly to homeless people, consider a dog to be an important companion. Nevertheless, for homeless individuals, the dog-human connection has even greater value. Some homeless people previously reported that although their dog is not an assistance animal, it works like one. For example, dogs may assist people with visual impairment when walking on the streets or help overcome symptoms related to PTSD or anxiety (Ramirez et al., 2022). Furthermore, it has been suggested that dog ownership is an efficient source of social support that may have buffered some of the negative mental health consequences caused by the COVID-19 pandemic (Martin et al., 2021). For these reasons, Kerman et al. (2019) proposed that with proper supervision and administration procedures, the dogs of homeless people could be registered as ESDs to facilitate their access to public buildings. However, the lack of standardized processes in ESD designation, training, and performed tasks complicates such advances (Foltin & Glenk, 2023).

In addition, public access for a homeless person and their dog may not be favored by the majority of society as many people with permanent housing think that homeless people should not have a pet at all (Irvine, 2013b; Irvine et al., 2012; Labrecque &

Walsh, 2011; Rhoades et al., 2015; Taylor et al., 2004). Interestingly, several studies (Howe & Easterbrook, 2018; Irvine, 2013a; Kerman et al., 2019; Rew, 2000; Taylor et al., 2004) report that homeless dog owners take responsibility for their dog by reducing their personal consumption of addictive substances or by avoiding criminal actions out of fear they may lose their dog (Howe & Easterbrook, 2018). Moreover, dogs owned by homeless people have been reported to be healthier, less likely to be obese, and exhibit fewer behavioral problems compared with dogs owned by people with permanent housing (Williams & Hogg, 2016). It is important to acknowledge, though, that the examination of the dogs was not carried out objectively; it was based on self-report responses. That the dogs of homeless people are less likely to be obese compared with those living in housed accommodation was also observed by Scanlon et al. (2022).

No significant differences emerged in the Owner–Dog Interaction subscale between homeless dog owners and those owners with permanent housing. Contrary to the study by Rullán-Oliver et al. (2023), who reported that prohibiting the use of public transport is perceived as a problem for homeless dog owners, in our study, homeless dog owners traveled with public transport more often than housed dog owners. In fact, 57% of homeless individuals stated they travel with their dogs every day compared with only 12% of housed dog owners. In the Czech Republic, traveling with a dog on public transport is broadly accepted. Of course, this finding could be because housed dog owners use a car more often than public transportation, which was not covered by the questionnaire and can therefore be seen as a limitation.

All other interactions (spending free time with the dog, playing with the dog, buying treats and presents, or grooming and hugging the dog) between owners and their dogs were similar between both cohorts. Interaction with a dog is an important relationship modulator. Dog owners who live alone tend to spend more time on taking care of their dog (Marinelli et al., 2007). Dogs owned by people with higher attachment scores are more likely to encourage and motivate their owners to go for walks (Westgarth et al., 2016). In addition, dogs are more likely to exhibit proximity-seeking behavior after a reunion with those owners who routinely interact with them (Rehn et al., 2013).

Besides the aforementioned benefits, dog ownership in homeless populations is connected to some costs, not only financial ones but also in relation to management problems (i.e., where to leave the dog in case the owner is absent; when visiting public buildings; going to the doctor or acquiring a job, which is tightly connected to the difficulties in finding a place to stay overnight) (Henwood et al., 2021; Howe & Easterbrook, 2018; Kerman et al., 2020; Rhoades et al., 2015; Rullán-Oliver et al., 2023; Scanlon, Hobson-West, et al., 2021; Scanlon, McBride, et al., 2021). Marked differences between the cohorts were found in relation to the statement “My dog costs me lots of money.” Surprisingly, most homeless dog owners (52%) totally disagreed with this statement compared with only 8% of housed dog owners, who rated more in the neutral valence. This was an unexpected finding but again confirms the strong emotional relationship between a dog owner experiencing homelessness and their dog. In the case of a strong attachment, the owner considers spending money for the dog as not a big sacrifice. As shown by White et al. (2022), spending money on pets promotes happiness, even if it is only a small amount of money. Also, people with limited financial possibilities regard veterinary care as a priority (Brockman et al., 2008).

Homeless dog owners face many problems, such as when seeking a shelter that will accept their dog; this has been discussed in other papers and seems to be a prevalent issue in many countries (Henwood et al., 2021; Howe & Easterbrook, 2018; Kerman et al., 2020; Rullán-Oliver et al., 2023; Scanlon, Hobson-West, et al., 2021; Scanlon, McBride, et al., 2021). Similarly, in the Czech Republic, very few shelters accept dogs. When they do, the dog must be kept in a kennel overnight (Smlsal, 2019), which the respondents in our study stated was unacceptable. According to Singer et al. (1995), 94% of homeless people would refuse a housing opportunity if they had to leave their pet behind. Homeless dog owners also state that their dog is a limitation when it comes to obtaining and holding down a job (Kerman et al., 2019; Rhoades et al., 2015). A number of the respondents in the present study also mentioned this problem. Although the majority were able to hold down part-time jobs where their dog could be present or they were able to leave their dog with friends, others did not want to have a job at all or wanted to panhandle with their dog, which increased the money they earned and facilitated talking to strangers (Lem et al., 2016; Rhoades et al., 2015). This is in line with the results of earlier research that indicates that dogs facilitate communication between unfamiliar people (Kidd & Kidd, 1994; McNicholas & Collis, 2000; Rhoades et al., 2015) by raising the social attractiveness of their owner.

The link between physical health and dog ownership within homeless populations was not addressed in this study and has not been investigated widely in other studies. Premature death and sickness are more common in homeless populations compared with housed ones (Nikoo et al., 2015). According to Slatter et al. (2012), homeless people do not self-report the physical health benefits of dog ownership. Since one of the common causes of death in homeless populations is hypothermia (Romaszko et al., 2017), dog ownership would be an interesting strategy to mitigate that risk. The heat provided by a dog was mentioned as a benefit by Brewbaker (2012) and was also reported by a respondent in this study.

It is well known that homeless people who own a dog visit fewer medical facilities. However, it is not known whether this is due to better health or complications related to where to leave the dog while entering the facilities (as found by, for example, Howe & Easterbrook, 2018 and Rhoades et al., 2015). In fact, Taylor et al. (2004) state that the health status of homeless dog owners is poorer than that of homeless non-dog owners due to their prioritization of the dog's health over their own. Similar findings by Ramirez et al. (2022) reveal that homeless people with pets visit veterinary surgeries significantly more often than general practitioners and that their self-reported health status is poorer than that of their dog. Also, when in need of hospitalization, homeless dog owners may refuse it because they lack suitable accommodation for their dog.

The expectation is that there is also a higher risk of zoonotic infections in populations with reduced immunity (Edwards, 2016). To this end, a higher prevalence of leptospirosis was found in the USA homeless dog-owner populations compared with housed ones (Leibler et al., 2016), and a higher prevalence of ectoparasites too (Brouqui et al., 2005). Ramirez et al. (2022) proposed a solution based on the One Health approach (Menna et al., 2019), which seeks to integrate health services so that pets and their owners can be treated simultaneously. Such facilities could also be useful for research in that health-related data from both homeless people and their dogs could be easily collected.

The physical benefits of pet ownership in people with permanent housing have been well documented in longitudinal studies, where better health, lower medicine intake, and fewer doctor visits have been reported (Headey & Grabka, 2007, 2011).

Overall, the perceived costs and benefits can differ across countries according to different legislation. Within this context, although the participants in our study suggested that squatting in abandoned cottages or sleeping in tents close to cities and in city parks are more or less tolerated in the Czech Republic, the situation in the USA is different, with many homeless dog owners living in fear of their pet being taken away or euthanized (Slatter et al., 2012). For future studies, it would be interesting to further compare the conditions under which homeless people and their dogs live across different countries and societies.

Limitations

The high number of respondents who participated in this study is a strength. However, the number of female participants in the group of permanently housed people was much higher than the number of male participants. Even if our analyses did not give rise to any relevant gender differences, future studies should focus on more gender-balanced participation. Permanently housed respondents filled in the online version of the MDORS, while homeless respondents filled it in mostly with help of the experimenter; this could have had an influence on the results. However, it was the only feasible way to collect data on a large number of participants. In addition, as the homeless participants in this study were recruited at vaccination events, they may have been more likely to take good care of their dogs and have stronger emotional bonds with them compared with those who would not consider free vaccinations for their dogs; hence, the findings may be biased.

Conclusion

This paper explored the perceived costs and benefits of dog ownership among two populations: homeless individuals and those with permanent housing. Homeless dog owners scored higher on emotional closeness, highlighting the importance of canine companions and the emotional support they provide to their owners living on the streets or under unstable conditions. Although some respondents in our study suggested that living with a dog on the street came with some difficulties, neither cohort perceived the costs as outweighing the benefits. Owner–dog interactions did not differ between the populations. In terms of future research, more international, cross-cultural, and in-depth research should be devoted to the study of dog–owner relationships and the impact thereof on their mutual health and wellbeing.

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