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The study of the beneficial effects of pet ownership on some aspects of human well-being and behaviors

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Abstract

There is extensive anecdotal and observational evidence suggesting that pet ownership provides mutual benefits for both humans and animals. The present study explored the relationship between human–pet attachment and various aspects of physical and psychological well-being across different demographic groups. To assess the bond between humans and their pets in relation to overall well-being in Dhaka city, Bangladesh, data from 328 pet owners were collected and analyzed over a one-month period (15 February to 15 July). Among the participants, 9.76% of pets were kept by young owners, 18.29% by older owners, and 71.95% by middle-aged individuals. Of the total respondents, 52.44% were female and 47.56% were male. The marital status of participants showed that 58.54% were married, 34.15% were unmarried, and 7.32% were divorced. In terms of family composition, 56.10% of owners had no children, 21.95% had one child, 17.07% had two children, and 4.88% had three. Regarding employment, 65.85% were employed, while 34.15% were unemployed. Most respondents (70.73%) lived in joint families, whereas 29.27% lived separately. When examining pet ownership experience, 62.20% had kept pets for a short period, while 37.80% had long-term ownership. The majority (65.85%) kept pets as companions or for recreational purposes, 28.05% for breeding, and 6.10% for security reasons. In terms of health impacts, 41.46% of owners reported no noticeable effect of pet ownership on chronic diseases or mental health. However, 9.76% observed improvements in conditions such as hypertension, diabetes, and heart disease, while 48.78% reported reduced feelings of anger, depression, loneliness, and restlessness due to pet companionship. A minority of owners (20.73%) experienced health issues such as ringworm, asthma, or allergic reactions related to pet ownership, whereas 79.27% reported no such problems. Overall, the findings suggest that keeping pets may positively influence human health and emotional well-being, with some benefits potentially lasting over an extended period.

Keywords: Pet Ownership; Physical; Psychological; Companion; Breeding; Hypertension; Diabetes; Ring Worm; Asthma

1. Introduction

The influence of companion animals on human health and psychological well-being has emerged as a prominent area of research over the past decade. An expanding corpus of qualitative and correlational evidence supports the prevailing assumption that pet ownership exerts a positive impact on human lives, yielding notable physical and mental health advantages that outweigh the temporal and financial commitments associated with their care (Wells, 2009). Although individuals of varying ages commonly report feelings of joy and satisfaction upon acquiring a pet, many remain unaware of the underlying physical, psychological, and health-related benefits of such companionship (Valeri, 2006; Lass-Hennemann *et al.,* 2020; Anderson *et al.,* 1992).

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Consequently, a growing number of studies have sought to empirically evaluate the potential benefits of pet ownership or animal companionship (Lass-Hennemann *et al.,* 2020; Lentino *et al.,* 2012; Levine *et al.,* 2013; Engel *et al.,* 2006; Matchock, 2015). Drawing upon Bowlby's attachment theory, which posits that humans possess an intrinsic need to form and maintain close relationships to achieve emotional stability and well-being (Bowlby, 1977), researchers have explored pet ownership as a viable mechanism for fulfilling this attachment requirement (McNicholas, 2005). Empirical findings indicate that pets particularly interactive species such as dogs and cats can mitigate stress, anxiety, depression, and loneliness (Young *et al.,* 2020; Brooks *et al.,* 2018), while simultaneously promoting greater physical activity and enhanced social engagement among their owners (Coleman *et al.,* 2008).

Several studies have reported temporary reductions in blood pressure and/or heart rate among experimental human subjects exposed to pet animals; however, no conclusive evidence has yet demonstrated sustained physiological improvements attributable to pet ownership (Katcher, 1981). Similarly, numerous cross-sectional comparisons between pet owners and non-owners have yielded inconsistent and largely inconclusive findings. While some investigations have failed to identify any significant relationship between pet ownership and enhanced health outcomes (Lago *et al.,* 1989), others have reported positive but ambiguous results that are difficult to interpret. Overall, existing evidence suggests that strong emotional attachment to companion animals may, to some extent, mitigate the adverse psychological effects of stressful life events such as bereavement, and may exert a beneficial influence on specific measures of anxiety and depression (Garrity, 1989).

Depression, anger, and loneliness represent some of the most prevalent mental health disorders, with depression being the most commonly reported among them. The highest incidence of depression is typically observed in adult populations. This condition can profoundly affect both physical and psychological health, often impairing an individual's ability to perform daily tasks effectively. Elevated levels of depressive symptoms are correlated with increased rates of physical illness, disability, and health care utilization, and in severe cases, may lead to suicidal ideation or behavior. In older adults, the risk of depression is influenced by multiple factors, including chronic medical illnesses and functional impairments, which together contribute to its heightened prevalence in this age group (Roberts *et al.,* 1997).

A wide range of therapeutic interventions is available for managing depression, including pharmacological treatments such as antidepressant medications and various forms of psychotherapy. In addition to these conventional approaches, complementary or alternative therapies have been employed either independently or in combination with standard treatment modalities. Among these, animal-assisted therapy (AAT) has shown promise in improving mental health outcomes (Antonioli and Reveley, 2005; Holcomb *et al.,* 1997). Consequently, animal-assisted activities and pet therapy are increasingly recognized as valuable adjuncts for alleviating depressive symptoms.

Extensive research has documented the health-related benefits of human–animal interactions, which include enhanced physical activity, improved social support networks, greater self-esteem, and reductions in stress and loneliness. Several empirical studies have highlighted the therapeutic potential of animal-assisted interventions in mitigating depressive symptoms. For instance, Holcomb et al. (1997) reported that increased social engagement resulting from the introduction of an aviary was significantly associated with lower levels of depression among elderly men.

Pet ownership particularly dog ownership has been associated with a wide range of physical health benefits. Empirical studies have demonstrated that owning a pet may reduce the risk of cardiovascular disease and mortality (Mubanga *et al.,* 2017), decrease the frequency of medical consultations (Headey and Grabka, 2007), and promote healthier lifestyle behaviors, including improved sleep quality and increased physical activity (Headey, Na, and Zheng, 2008). Beyond these physiological advantages, pet ownership has also been linked to favorable psychological outcomes, such as enhanced mood (Turner *et al.,* 2003), lower perceived stress (Kertes *et al.,* 2017), reduced depressive symptoms (Cheung and Kam, 2017), and diminished feelings of loneliness (Black, 2012; Stanley *et al.,* 2013).

This so-called *"magic effect"* of pet ownership is often attributed to the animal's ability to provide emotional security and companionship, which in turn reduces stress and alleviates anxiety. Routine caregiving activities—such as feeding, walking, or grooming pets—may also contribute to improved mood and emotional well-being. Moreover, the psychological benefits of animal interaction are not limited to traditional companion animals such as cats and dogs; even passive observation, such as watching fish swim in an aquarium, has been shown to reduce muscle tension and lower heart rate (Feldman, 2019).

Conversely, pet ownership is not without potential drawbacks. Animals can serve as vectors for zoonotic diseases, particularly parasitic infections, posing potential public health risks (Sterneberg-van *et al.,* 2016; Zucca *et al.,* 2021). Furthermore, inadequate housing or improper handling of certain animal species may increase the likelihood of physical injury to humans (Sterneberg-van *et al.,* 2016). Pet ownership can also impose a significant economic burden due to the

costs of specialized diets, veterinary care, and other maintenance requirements (Hall, 2017). In addition, the psychological distress associated with the loss of a beloved companion animal can have a profound negative emotional impact on owners (Hui, 2021).

The purpose of the study was to explore some of the factors proposed to influence the link between pet ownership and human well-being and also to examine the relationship between pet ownership, pet attachment, and psychological health among community-dwelling older adults.

2. Material and Methods

2.1. Study area and duration of study

This study has been carried out at Teaching and Training Pet Hospital and Research Center (TTPHRC), Chittagong Veterinary and Animal Sciences University (CVASU). A total of 82 cases record of Dhaka city area were collected during the 1-month study period (15th February – 15th July, 2022).

2.2. Sampling strategy

The methodology of sampling has been applied by simple random method. Prior to this study, a questionnaire was designed and followed during the sampling time. Questions were close ended and covered issues regarding to the study. At the time, 328 registered sample was conducted,

2.3. Data analysis

All data were tabulated using commercial software (Microsoft Excel version 2016, Microsoft, USA), analyzed with a statistical program (STATA-14) and results expressed as frequencies, proportions and ratios.

3. Results and discussions

A summary of the information's regarding pet ownership included in the study is presented in bellow tables.

Table 1 Frequency distribution of age of owner

Age of owner	Frequency	Percentage (%)
Young (10-20 years)	32	9.76
Middle (21-50 years)	236	71.95
Old (>50 years)	60	18.29
Total	328	100

Among the 328 participants surveyed, 236 individuals (71.95%) were middle-aged pet owners, followed by 60 participants (18.29%) who were elderly and 32 participants (9.76%) who were young adults. In contrast, the study conducted by Southerland (2007) reported that participants (n = 96) ranged in age from 55 to 87 years, with a mean age of 69.61 ± 7.95 years, indicating a marked difference in age distribution compared with the present study.

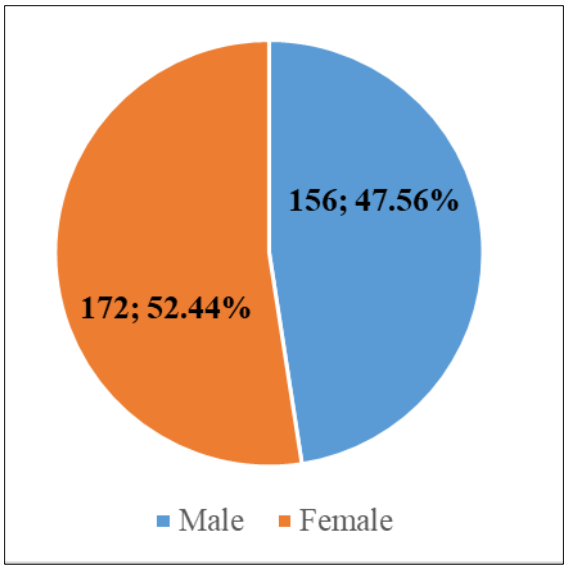

Figure 1 Frequency distribution of gender of owner

In the present study, 52.44% (n = 172) of participants were female, while 47.56% (n = 156) were male. In contrast, Southerland (2007) reported a considerably higher proportion of female participants (76.7%) compared to males (23.3%). Similarly, Pranschke (2019) found that females constituted 72.8% (n = 75) of the sample, whereas males accounted for 24.3% (n = 25) and others represented 2.9% (n = 3). Unlike these previous studies, the current findings revealed a relatively balanced gender distribution, with only a small difference between male and female participants.

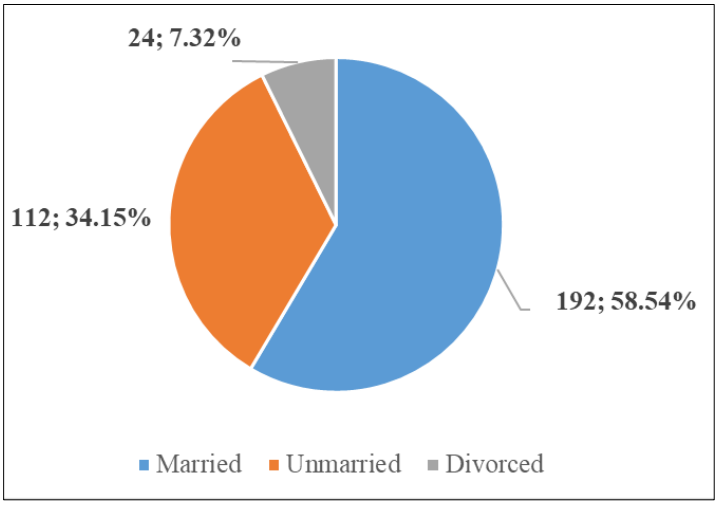

Figure 2 Frequency distribution of owner's marital status

With respect to marital status, the present study revealed that 58.54% (n = 192) of the participants were married, 34.15% (n = 112) were unmarried, and 7.32% (n = 24) were divorced. In comparison, Southerland (2007) reported that 52.9% (n = 54) of respondents were married, followed by 31.4% (n = 32) who were widowed, 13.7% (n = 14) divorced, 1% (n = 1) separated, and 1% (n = 1) never married. Similarly, Pranschke (2019) found that 79.6% (n = 82) of participants were married, whereas 20.4% (n = 21) were single. Across all studies, the majority of participants were married, indicating that marital individuals tend to represent the largest proportion of pet owners.

Table 2 Frequency distribution of owner's employment status

Employment status	Frequency	Percentage (%)
Employed	216	65.85
Unemployed	112	34.15
Total	328	100

In the current study, 65.85% (n = 216) of pet owners were employed, while 34.15% (n = 112) were unemployed. In contrast, Southerland (2007) reported that the majority of participants were retired (73.2%), followed by those who were employed (20.6%) and individuals unable to work (6.2%). These findings indicate notable differences in occupational status distribution between the present study and previous research.

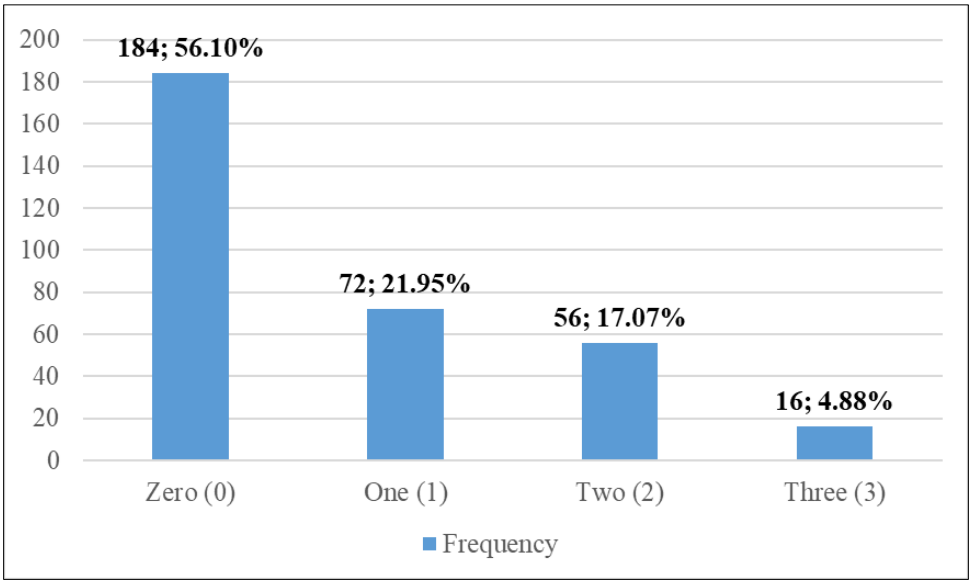

Figure 3 Frequency distribution of owner's children number

Regarding the number of children, 56.10% (n = 184) of pet owners in the present study reported having no children, followed by 21.95% (n = 72) with one child, 17.07% (n = 56) with two children, and 4.88% (n = 16) with three children.

Table 3 Frequency distribution of owner's family type status

Types of family	Frequency	Percentage (%)
Joint	232	70.73
Separated	96	29.27
Total	328	100

Among the 328 participants, 70.73% (n = 232) reported living in a joint family, while 29.27% (n = 96) were living separately from their original family. During the survey, it was identified that the primary reason for separation in these cases was related to pet ownership. Conflicts arose when other family members disapproved of keeping pets or experienced frequent difficulties associated with them, prompting some participants to live independently from their original households.

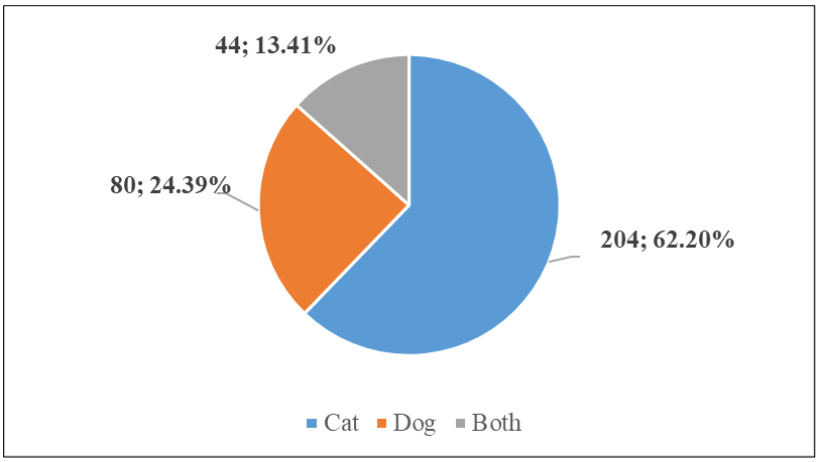

Figure 4 Frequency distribution of species of pet reared by owner

During the study period, a total of 328 pet owners were surveyed. Among them, 62.20% (n = 204) kept cats, 24.39% (n = 80) kept dogs, and 13.41% (n = 44) owned both cats and dogs. In contrast, Pranschke (2019) reported that 41.7% (n = 43) of participants owned dogs, 28.2% (n = 29) owned cats, another 28.2% (n = 29) kept both cats and dogs, and 1.9% (n = 2) had other types of pets. These findings indicate notable differences, as cats represented the highest proportion of pets in the present study, whereas dogs were the most common in Pranschke's research.

Table 4 Frequency distribution of pet's number of owner

Number of pets	Frequency	Percentage (%)
Large size (>10)	56	17.07
Medium (6-10)	44	13.41
Small (1-5)	228	69.51
Total	328	100

In the present study, pet ownership was categorized according to the number of pets and their size. The majority of participants, 228 owners (69.51%), kept small-sized pets. Medium-sized pets were kept by 44 owners (13.41%), while large-sized pets were owned by 56 participants (17.07%).

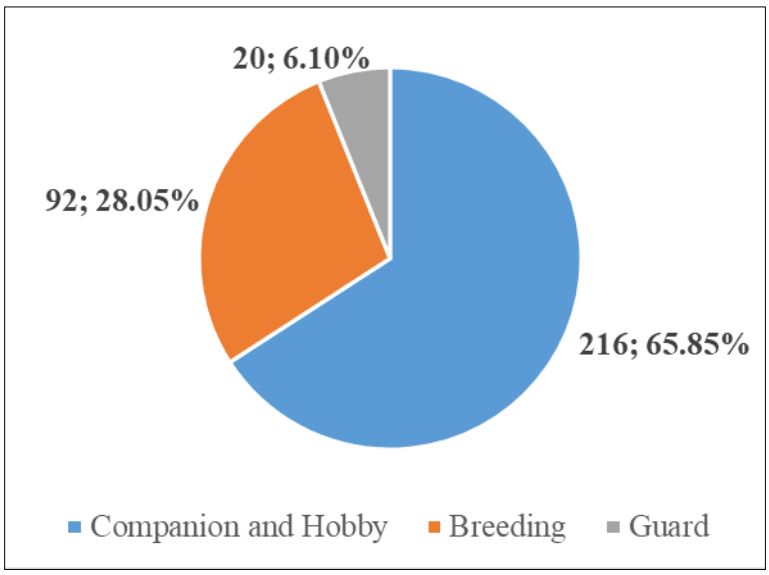

Figure 5 Frequency distribution of purpose of pet ownership

Pet ownership serves multiple purposes. In the present study, the primary motivations for keeping pets were examined. The findings indicated that 65.85% (n = 216) of owners kept pets for companionship and as a hobby, 28.05% (n = 92) for breeding purposes, and 6.10% (n = 20) for security.

Table 5 Frequency distribution of pet ownership duration

Duration of pet ownership (Year)	Frequency	Percentage (%)
Short (1-5 years)	204	62.20
Long (>5 years)	124	37.80
Total	328	100

The duration of pet ownership can vary considerably among individuals. In the present study, 62.20% (n = 204) of participants had owned their pets for a short period, whereas 37.80% (n = 124) had maintained pet ownership over a longer duration.

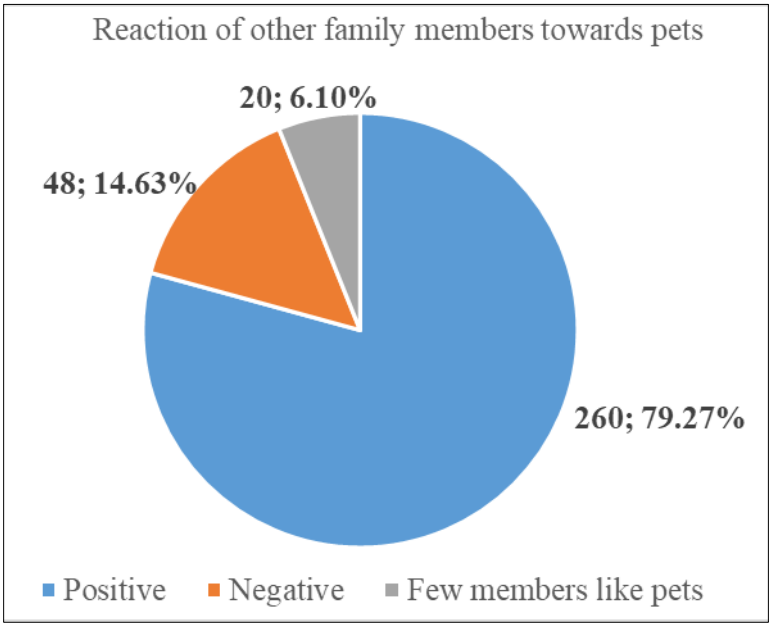

Figure 6 Frequency distribution of attitudes of other family members towards pets

Family members' attitudes toward pets can vary considerably among households. Globally, there is a growing trend to regard pets as integral members of the family. Many individuals enjoy the companionship of their pets through activities such as walking, playing, and even conversing with them. Pets are increasingly included in family events and can hold significant emotional value, particularly in single-parent households where they may serve as important companions for children. In the present study, among 328 observations, 79.27% (n = 260) of other family members expressed a positive attitude toward pets, 14.63% (n = 48) displayed negative reactions, and only 6.10% (n = 20) reported a neutral or limited interest in having pets in the family.

Table 6 Frequency distribution of reduction of some chronic disease/mental state or not

Elimination of some chronic disease or mental state	Frequency	Percentage (%)
Yes	192	58.54
No	136	41.46
Total	328	100

Emotional attachment to pets has been associated with various health benefits for humans, as individuals often invest the greatest care in animals that live with them. In the present study, 58.54% (n = 192) of pet owners reported experiencing positive effects, including reductions in certain chronic conditions or improvements in mental well-being, while 41.46% (n = 136) observed no significant changes in their health status as a result of pet ownership.

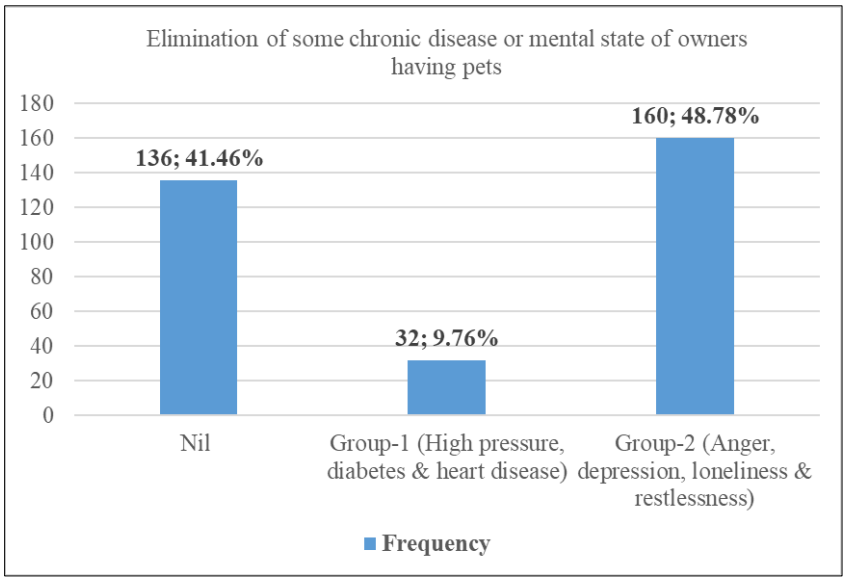

Figure 7 Frequency distribution of reduction checklist of some chronic disease or mental state

The reduction of certain chronic diseases or mental health conditions was documented and assessed in relation to the owners' medical histories. To facilitate data analysis and interpretation, all recorded outcomes were categorized as shown in Table 13. Among the 328 records, 41.46% (n = 136) of owners reported no observable effect of pet ownership on their chronic conditions or mental health. In contrast, 9.76% (n = 32) of participants experienced improvements in group-1 type diseases or mental states, while the majority, 48.78% (n = 160), reported reductions in group-2 type diseases or mental states as a result of owning a pet.

Several studies have suggested that pet ownership may confer cardiovascular health benefits. For instance, individuals with borderline hypertension who adopted dogs demonstrated a significant reduction in blood pressure within five months (Wright *et al.,* 2007; Levine *et al.,* 2013). Similarly, an Australian study by Anderson *et al.,* 1992, which included 5,741 participants attending a free screening clinic, found that pet owners exhibited significantly lower systolic blood pressure (P = 0.03) compared to non-owners, despite no differences in BMI or socioeconomic status. In another investigation, Wright *et al.,* 2007, assessed 1,179 subjects and reported that pet owners had lower systolic blood pressure (132.8 vs. 139.5 mm Hg), reduced pulse pressure (55.5 vs. 63.9 mm Hg), and lower mean arterial pressure (105.0 vs. 107.6 mm Hg) compared to individuals without pets.

In recent years, domestic dogs have been trained to respond to medical emergencies in diabetic patients, representing a novel advancement in the potential applications of pet ownership. Known as *glycaemia alert dogs*, these animals have been reported to significantly improve the quality of life for individuals with Type 1 diabetes. Rooney *et al.,* 2019, conducted a study involving a small number of dogs and observed variable performance in responding to hypo- and hyperglycemic episodes. Overall, the median sensitivity of the dogs to out-of-range blood glucose events was 70%, with 83% (range: 66–94%) sensitivity for hypoglycemic episodes and 67% (range: 17–91%) for hyperglycemic episodes. The study further highlighted that the dogs' performance was influenced by their individual characteristics, the quality of the human-animal partnership, and the household environment (Rooney *et al.,* 2019).

Companionship provided by pets can serve as a protective factor against illness, whereas social isolation and loneliness are known to exacerbate symptoms of depression and anxiety (Hussein *et al.,* 2021; Rahman, 2015). Brooks *et al.,* 2018, conducted a systematic review to assess the impact of pet ownership on individuals with mental health conditions, incorporating 17 studies in their analysis. They found that pets generally had a positive effect on managing mental health, particularly during periods of crisis. However, the review also highlighted potential drawbacks, including the emotional and practical responsibilities associated with pet care and the negative psychological consequences of pet loss.

Several studies have demonstrated that pet ownership can alleviate feelings of loneliness and social exclusion (Banks and Banks, 2002), thereby reducing daily stress and associated symptoms of depression and anxiety (Wells, 2009). Various interventions, commonly referred to as *pet therapy*, utilize pet companionship to prevent loneliness and diminish the sense of social isolation (Podberscek *et al.,* 2000). For example, among hearing-impaired individuals, dog ownership has been shown to reduce feelings of loneliness (Guest *et al.,* 2006). Similarly, Pikhartova *et al.,* 2014, examined data from 5,210 participants in the English Longitudinal Study of Ageing to evaluate the relationship between pet ownership and loneliness. Their findings indicated that 41% of participants owned a pet in 2001, compared to 30% in 2010. The association between pet ownership and loneliness was particularly pronounced in women, with evidence suggesting a bidirectional relationship: pet ownership both influenced reports of loneliness and was influenced by prior experiences of loneliness. The study concluded that raising a pet significantly affects loneliness in women, while experiences of loneliness can also motivate pet ownership (Pikhartova *et al.,* 2014).

In an observational study involving 2,199 participants, Coleman *et al.,* 2008, reported that obesity rates (BMI > 30 kg/m^2) were significantly lower among dog walkers (17%) compared to dog owners who did not walk their dogs (28%) and non-owners (22%). The study further demonstrated that dog walking was associated with higher levels of moderate-to-vigorous physical activity, with 53% of dog walkers achieving this activity level, compared to 33% of owners who did not walk their dogs and 46% of non-owners.

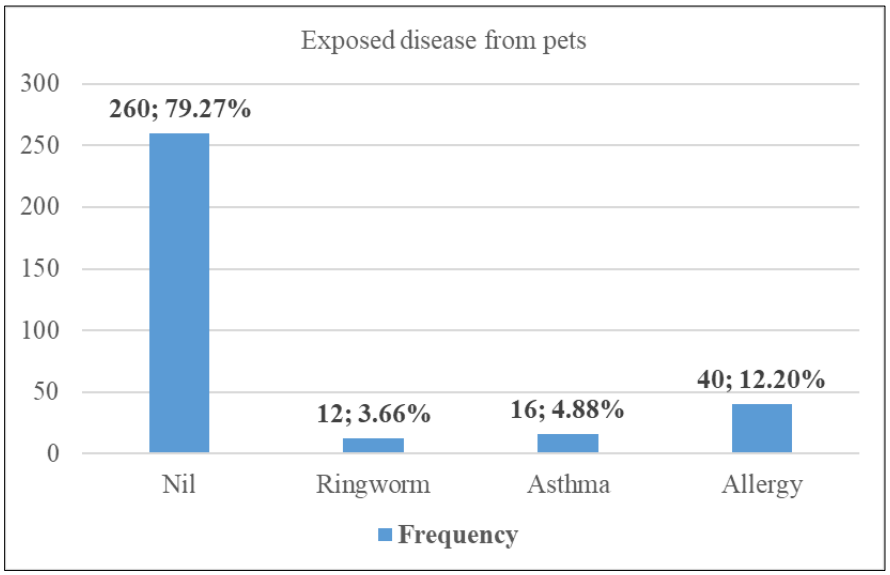

Figure 8 Frequency distribution of checklist of exposed disease

Pet animals live in close proximity to humans, which can pose a risk of zoonotic disease transmission if the animals are infected. In the present study, 79.27% (n = 260) of pet owners reported no disease exposure from their pets. However, 12.20% (n = 40) experienced allergic reactions, 4.88% (n = 16) reported asthma, and 3.66% (n = 12) had ringworm infections linked to pet contact. Children are particularly susceptible to ringworm, which can be transmitted through direct contact with infected cats and dogs. This infection typically presents as a dry, scaly, circular lesion with a raised red border and a clear center.

4. Conclusion

Although pet ownership is often perceived merely as a recreational activity or a source of companionship, substantial evidence indicates that it offers notable physical and psychological health benefits. In particular, pet ownership has been shown to promote physical activity, reduce the risk of cardiovascular disease, and alleviate feelings of loneliness and depression. Therefore, selecting an appropriate companion animal may serve as an effective means of enhancing overall well-being and quality of life.

Compliance with ethical standards

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Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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