

A Comparative Study of Health and Wellbeing in Street Dogs Versus Pet Dogs

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Abstract

This study compares the health and well-being of street dogs and pet dogs, considering factors such as diet, exercise, healthcare access, and environmental influences. While pet dogs benefit from consistent care, vaccinations, and controlled environments, they are prone to lifestyle-related health issues like obesity and behavioural problems. Street dogs, despite limited access to medical care and regular nutrition, display stronger immune systems, higher adaptability, and resilience due to exposure to varied environments.

Using a sample of 10 street dogs and 10 pet dogs, the study evaluates differences in body condition, coat health, immune resilience, behavioural traits, and veterinary care. Results indicate that street dogs exhibit better immune response and higher activity levels but suffer from malnutrition and untreated injuries. Conversely, pet dogs show fewer injuries and better coat conditions but face challenges like anxiety and sedentary lifestyles.

The findings highlight the unique health profiles of both groups, shaped by their environments. A balanced approach that combines the resilience of street dogs with the structured care of pet dogs could optimize canine health outcomes. Future research with larger samples is recommended to enhance these insights and inform intervention strategies.

Keywords: Street dogs, Pet dogs, Canine health, Veterinary care, Animal welfare

1. Introduction

For thousands of years, dogs and humans have coexisted and evolved alongside one another, ever since dogs were first domesticated. In modern times, many dogs are cared for as pets by humans, while others live as strays on the streets or in shelters. Stray dogs, by nature, are more likely to encounter a variety of viral and bacterial pathogens due to their limited access to vaccinations, medical treatment, and high-quality food. This exposure could lead to differences in the immune system responses between stray and owned dogs.

The health and well-being of dogs vary significantly based on their living environments. Pet dogs are typically provided with consistent food, shelter, and veterinary care, while street dogs often must fend for themselves in environments that may lack adequate nutrition, medical care, and protection from diseases. This study explores whether street dogs are healthier than pet dogs at home, examining factors such as diet, exercise, healthcare, and environmental influences.

In recent years, the contrast between the health outcomes of street dogs and pet dogs has garnered

increasing attention. Pet dogs, nurtured by their owners, are generally viewed as healthier due to their access to regular veterinary care, controlled diets, and safe living conditions. Conversely, street dogs, despite facing challenges like malnutrition, injuries, and lack of healthcare, often exhibit remarkable resilience and adaptability. This study aims to critically evaluate the health and well-being of street dogs in comparison to pet dogs, considering the complex interplay of environmental and lifestyle factors.

Literature Review

A review of existing literature reveals contrasting perspectives on the health of street dogs versus pet dogs. Several studies suggest that street dogs may have advantages in certain health aspects, while pet dogs' benefit from regular care but may face lifestyle-related health issues.

1. Obesity and Chronic Diseases:

According to Sharma et al. (2020), street dogs have significantly lower rates of obesity and chronic diseases such as diabetes and arthritis compared to pet dogs. The lack of overfeeding and a more active lifestyle contribute to this phenomenon. In contrast, pet dogs, especially those in sedentary environments, are more prone to obesity and related conditions due to overfeeding and lack of exercise.

2. Immune System Resilience:

Singh et al. (2018) found that street dogs often possess stronger immune systems, attributed to their exposure to a wide range of pathogens in their environment. This continuous exposure may lead to the development of a more robust immune response, making them less susceptible to certain infections. Pet dogs, while protected from many environmental pathogens, may have less developed immune systems due to limited exposure.

3. Behavioural Issues:

Behavioural problems are more commonly observed in pet dogs, as noted by Jain et al. (2019). Issues such as anxiety, aggression, and stress are often linked to a lack of socialization and exercise in pet dogs. Street dogs, living in more dynamic environments, tend to be more socially adept and less prone to such behavioural challenges.

Methodology

Animal selection:

This study conducted a comparative analysis of the health and well-being of 10 street dogs in urban areas and 10 pet dogs in households. The methodology was adapted to account for the smaller sample size while still allowing for meaningful observations and comparisons.

For stray dogs, selection was made from dogs in shelters with the written permission of the shelters. Ownership of owned dogs since birth was confirmed from the pet owners. Shelter records confirmed that the shelter dogs had been stray since birth.

Observational Assessments:

For the street dogs, observational assessments were conducted in selected urban areas where street dogs are commonly found. Physical health was assessed through visual observation, focusing on key indicators such as body condition (underweight, normal, overweight), coat condition, mobility, and visible signs of injury or disease. These observations were made from a distance to avoid disturbing the dogs, ensuring their natural behaviour and health conditions were accurately recorded.

Interviews with Community Members:

Information about the street dogs was further supplemented by interviews with local community members,

such as shopkeepers, residents, and animal welfare volunteers. These individuals provided insights into the dogs’ daily routines, feeding habits, social interactions, and any known health issues. This qualitative data complemented the observational assessments, providing a fuller picture of the health and well-being of the street dogs.

Owner Questionnaires for Pet Dogs:

For pet dogs, detailed information was gathered through questionnaires completed by the dog owners. The questionnaires included questions about the dogs’ diet, exercise routines, frequency of veterinary visits, and any known health issues. This data was used to provide a comprehensive profile of the health and well-being of the pet dogs, which was then compared to the observations of the street dogs.

Results:

Table :1 – Summary of the Results

No	Category	Street Dogs (n=10)	Pet Dogs (n=10)
1	Body Condition	Majority normal, few underweight or overweight	Majority normal, few overweight
2	Coat Condition	Rough/matted, signs of neglect	Generally well-maintained, few issues
3	Visible Injuries	Minor injuries/scars observed	Minimal injuries observed
4	Immune System Resilience	Generally healthy despite harsh conditions	Some issues like allergies and digestive problems
5	Behavioural Health	High adaptability, some aggression in territorial disputes	Some anxiety and aggression reported by owners
6	Social Interaction	Frequent social interaction with humans and other animals	Limited socialization, often confined to the household
7	Feeding Habits	Irregular, dependent on community feeding	Regular, controlled diet
8	Exercise Level	High due to constant movement	Varies, some with low exercise levels
9	Veterinary Care	Minimal or none	Regular veterinary visits, vaccinations, check-ups

Table 2: Comparison of Numerical results

No	Category	Street Dogs (n=10)	Pet Dogs (n=10)
1	Body Condition	Normal: 7, Underweight: 2, Overweight: 1	Normal: 6, Overweight: 4
2	Coat Condition	Good: 2, Fair: 4, Poor: 4	Good: 8, Fair: 2, Poor: 0
3	Visible Injuries	Injuries: 5, No injuries: 5	Injuries: 1, No injuries: 9
4	Immune System Resilience	Healthy: 8, Frequent illness: 2	Healthy: 6, Frequent illness: 4
5	Behavioural Health	Normal: 6, Aggressive: 3, Anxious: 1	Normal: 5, Aggressive: 2, Anxious: 3

6	Social Interaction	High: 7, Moderate: 3, Low: 0	High: 4, Moderate: 4, Low: 2
7	Feeding Habits	Irregular: 9, Regular: 1	Regular: 10, Irregular: 0
8	Exercise Level	High: 7, Moderate: 3, Low: 0	High: 3, Moderate: 4, Low: 3
9	Veterinary Care	Regular: 0, None: 10	Regular: 10, None: 0

Discussion:

Given the reduced sample size, the results of this study are presented with caution regarding their generalizability. However, the findings still provide valuable insights into the health and well-being of both street and pet dogs.

Body Condition

Street Dogs: The majority of street dogs were observed to have a normal body condition, with only a few being underweight and one overweight. This is likely due to the necessity for constant movement and the need to look for food, which prevents obesity but can also lead to undernutrition.

Intervention: Improving access to reliable food sources for street dogs could address issues of underweight and malnutrition. Community feeding programs, where local residents provide balanced meals, could help in maintaining the health of these dogs.

Pet Dogs: A higher proportion of pet dogs were overweight, which could be attributed to overfeeding, lack of exercise, and the sedentary lifestyles common among pets. Owners may overfeed their dogs, either out of love or a lack of understanding of proper dietary needs.

Intervention: Educating pet owners about the importance of balanced diets and regular exercise for their dogs could help reduce obesity rates. Veterinary guidance on proper feeding and exercise routines should be emphasized during regular check-ups.

Coat Condition

Street Dogs: The coat condition of street dogs varied, with many showing signs of neglect such as rough or matted fur. This is likely due to the lack of grooming and the harsh environmental conditions they face. Exposure to dirt, parasites, and a lack of bathing contribute to poor coat condition.

Intervention: Regular grooming and access to parasite control measures could significantly improve the coat condition of street dogs. Community-led initiatives, possibly supported by local animal welfare organizations, could organize periodic grooming and health check-ups for street dogs.

Pet Dogs: Pet dogs had significantly better coat conditions, primarily because they are regularly groomed and bathed. Owners also often use flea and tick preventatives, contributing to healthier coats.

Intervention: Pet owners should continue regular grooming and use of appropriate parasite control methods. Awareness programs could educate new pet owners on the importance of maintaining their dog’s coat health.

Visible Injuries

Street Dogs: The presence of visible injuries in street dogs is common, often resulting from fights with

other animals, accidents, or harsh living conditions. The lack of access to veterinary care means these injuries often go untreated, leading to chronic issues or infections.

Intervention: Establishing mobile veterinary clinics that can provide on-site care for street dogs could help treat injuries promptly. Community reporting systems where citizens can alert authorities about injured dogs could also facilitate quicker response times.

Pet Dogs: Pet dogs had fewer visible injuries, likely due to their safer living environments and the immediate care they receive if injured. Owners typically seek veterinary assistance quickly when their pets are hurt.

Intervention: Pet owners should continue to monitor their dogs for any signs of injury and seek prompt veterinary care. Providing pet first-aid education to owners can also help in managing minor injuries at home before professional care is available.

Immune System Resilience

Street Dogs: Street dogs appeared to have stronger immune systems, possibly due to their constant exposure to various pathogens in their environment. This continuous exposure likely helps their immune systems become more robust, allowing them to fend off infections more effectively.

Intervention: While it's not practical to expose pet dogs to pathogens intentionally, strengthening their immune systems through a healthy diet, regular exercise, and vaccinations can provide them with better protection against diseases.

Pet Dogs: Pet dogs, while protected from many environmental pathogens, may have less robust immune systems due to their controlled environments. They are often more susceptible to allergies and digestive issues, possibly due to limited exposure to varied environments and stimuli.

Intervention: A well-balanced diet, regular outdoor activity, and minimal exposure to overly sanitized environments can help strengthen a pet dog's immune system.

Behavioural Health

Street Dogs: Street dogs displayed a range of behaviours, with some showing aggression, especially in territorial disputes. However, most street dogs were socially adept, likely due to their need to interact with both other dogs and humans regularly. Their behaviour is shaped by survival needs and the constant need to adapt to changing environments.

Intervention: Introducing community-based behaviour management programs can help reduce aggressive behaviours in street dogs, making them safer to coexist with humans. These programs can include neutering, which is known to reduce aggression, and behavioural training for dogs in high-conflict areas.

Pet Dogs: Some pet dogs exhibited behavioural issues like anxiety or aggression, often linked to a lack of socialization and exercise. These problems are typically more common in dogs that are left alone for long periods or those not adequately exposed to different social environments.

Intervention: Pet owners should be encouraged to socialize their dogs from a young age and provide regular opportunities for interaction with other dogs and people. Behavioral training and ensuring adequate mental and physical stimulation can also mitigate these issues.

Social Interaction

Street Dogs: Street dogs exhibited high levels of social interaction, as they often live in groups and regu

larly interact with both other dogs and humans. This social structure helps them develop communication and adaptability.

Intervention: Maintaining these social groups is important for the mental well-being of street dogs. Disruptions to these groups, such as sudden removal of dogs, can cause stress and should be managed carefully, potentially by local animal control authorities.

Pet Dogs: Pet dogs showed varied levels of social interaction, with some receiving plenty of interaction and others less so, often depending on their owners' lifestyles. Dogs that are regularly walked and socialized tend to be better adjusted and less anxious.

Intervention: Encouraging pet owners to provide regular socialization opportunities for their dogs, such as through dog parks or playgroups, can improve their dogs' social skills and mental health.

Feeding Habits

Street Dogs: The feeding habits of street dogs were irregular, largely dependent on what they could scavenge or what was provided by community members. This inconsistency can lead to malnutrition or periods of starvation, but it also prevents overfeeding and obesity.

Intervention: Establishing community feeding stations where street dogs can receive regular, nutritious meals can help improve their overall health. These stations can be managed by local animal welfare groups or through community initiatives.

Pet Dogs: Pet dogs had regular, controlled feeding habits, which generally leads to better nutrition. However, the risk of overfeeding by well-meaning owners can lead to obesity and associated health issues.

Intervention: Pet owners should be educated on appropriate portion sizes and the dangers of overfeeding. Regular veterinary consultations can help monitor a pet's weight and adjust their diet as needed.

Exercise Level

Street Dogs: Street dogs had high exercise levels due to their need to constantly move in search of food, shelter, and safety. This high level of activity helps them maintain a healthy body weight and overall fitness.

Intervention: Ensuring that street dogs have safe areas where they can roam freely without the risk of accidents or conflicts can help maintain their high activity levels.

Pet Dogs: The exercise levels of pet dogs varied, with some receiving regular exercise and others leading more sedentary lives. Dogs that do not get enough exercise are at risk for obesity and related health problems.

Intervention: Pet owners should be encouraged to provide regular exercise for their dogs, tailored to the dog's breed, age, and health status. This can include daily walks, playtime, and opportunities for more intense physical activity.

Veterinary Care

Street Dogs: None of the street dogs had access to regular veterinary care, leaving them vulnerable to untreated injuries and diseases. The lack of vaccinations also puts them at risk for preventable diseases.

Intervention: Mobile veterinary clinics or regular community veterinary days could provide street dogs with essential care, including vaccinations, parasite control, and treatment for injuries.

Pet Dogs: All pet dogs received regular veterinary care, including vaccinations and check-ups, which contributed to better health outcomes. Regular vet visits help in the early detection and treatment of health

issues.

Intervention: Continued education for pet owners on the importance of regular veterinary care is essential. Encouraging preventive care and early intervention can improve the health and lifespan of pet dogs.

Conclusion

This comparative study highlights that both street dogs and pet dogs have unique health advantages and challenges. Street dogs may benefit from stronger immune systems and lower rates of lifestyle-related diseases, but they are also at greater risk of environmental hazards and malnutrition. Pet dogs, while receiving better overall care and attention, face health challenges related to lifestyle, such as obesity and behavioural issues.

This study, though limited by a small sample size, suggests that street dogs and pet dogs each have distinct health profiles shaped by their environments. Street dogs showed resilience and adaptability, while pet dogs faced issues related to lifestyle.

These findings highlight the importance of considering both lifestyle and environmental factors in canine health. A balanced approach, incorporating the active lifestyle and resilience seen in street dogs with the preventive care and nutrition provided to pet dogs, could lead to optimal health outcomes for all dogs. Future studies with larger sample sizes could provide more robust data and help develop strategies to optimize the health and well-being of both street and pet dogs.

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