Improving The Living Conditions Of Stray Dogs In Delhi NCR

Ayushi Dhakad¹, Harsh Mehta², Niketa Chakrabarti³
Student¹, Assistant Professor², Associate Professor³
Pearl Academy, Rajouri Garden, New Delhi

Abstract—This research paper delves into the living conditions and overall welfare of stray dogs in the Delhi National Capital Region (NCR) and endeavours to comprehend their existing situations with the objective of proposing viable measures for improvements. The study employs a quantitative research method, with data collection carried out through the dissemination of a survey questionnaire among various localities. The analysis of the quantitative survey data yields a worrying reality, indicating that most regions within Delhi NCR exhibit insufficient living conditions for stray dogs. The revealed outcomes underscore the imperative need for immediate intervention to address the welfare challenges faced by these animals. The findings serve to shine a spotlight on the urgency of implementing measures that can improve the living conditions and overall well-being of stray dogs in Delhi NCR. As a result, this study makes a valuable contribution to the expanding body of knowledge on animal welfare, particularly shedding light on the plight of stray dogs in urban settings, and advocates for effective policies and actions to tackle the obstacles confronted by these animals across different regions. This research work is significant in its implications for policymaking and intervention strategies aimed at alleviating the welfare issues faced by stray dogs in urban environments.

The findings call for the development and implementation of comprehensive measures such as targeted vaccination programs, widespread sterilization campaigns, robust adoption drives, and intensified public awareness initiatives to address the challenges faced by stray dogs in Delhi NCR and beyond. Furthermore, this study stresses the importance of collaborative efforts involving municipal authorities, animal welfare organizations, and the community to ensure the successful implementation of these proposed measures. In conclusion, this research paper fills a crucial gap by shedding light on the inadequate living conditions and pressing welfare challenges encountered by stray dogs in Delhi NCR. It advocates for the formulation and execution of proactive measures to protect and improve the well-being of these animals. The insights garnered from this study have the potential to inform and guide the development of effective policies and actions aimed at enhancing the living conditions and welfare of stray dogs not only within Delhi NCR but also in other urban regions facing similar challenges.

Key words—Delhi NCR, Improvement, Stray Dogs, Welfare
1. INTRODUCTION

The bustling roads of Delhi National Capital Region (NCR) are home not only to millions of individuals, but additionally to a critical population of stray canines. These strong animals explore through urban scenes, regularly confronting different challenges such as need of shelter, food, disease, and mistreatment. Despite of playing a basic part in the urban environment, their well-being is as often as possible dismissed, leaving them powerless to cruel conditions and human indifference. In recent years, concerns with respect to the welfare of stray dogs in Delhi NCR have gained increased attention from animal welfare organizations, policymakers, and concerned citizens. In any case, in spite of infrequent attempts to address these issues, the prevailing living conditions of stray dogs stay a pressing concern and a reflection of societal values and demeanours towards animal welfare. This research points out to educate the current issues concerning the living conditions of stray dogs and support for significant measures to progress their welfare.

By addressing issues such as access to food and water, shelter, healthcare, and public sympathy, we try to make a more compassionate and comprehensive urban environment for both people and animals alike. Eventually, this study serves as a catalyst for collaborative activity among distinctive stakeholders—government organizations, non-profit organizations, community leaders, and citizens—to prioritize the well-being of stray dogs and guarantee their significant presence in Delhi NCR. By working together towards this common objective, we can cultivate a more sympathetic and compassionate society where the welfare of all animals, despite of species, is regarded and protected.

1.1 Aim

The aim is to investigate the current scenario of living conditions and overall welfare of stray dogs in Delhi NCR and what are the measures to overcome it.

1.2 Objective

1. To understand the well-being and living conditions of stray dogs in the present scenario.
2. Identifying the main factors affecting their well-being.
3. To provide recommendation as to improving the current living situations & welfare of stray dogs.

2. LITERATURE REVIEW

2.1 Existing with citations

Street dogs have historically existed alongside human settlements, benefiting from food and shelter provided by human activity. However, the lack of structured management has led to overpopulation, resulting in conflicts with humans and negative public health impacts. Effective management strategies are crucial to balance the needs of street dogs and human populations. International guidelines, such as those proposed by the World Health Organization (WHO) and the World Organization for Animal Health (OIE), emphasize humane approaches like sterilization and vaccination.

The primary method for controlling street dog populations is the Animal Birth Control (ABC) Programme, which focuses on sterilization and vaccination. Sterilization prevents reproduction, while vaccination, particularly against rabies, addresses public health concerns. Studies indicate that the ABC Programme is effective in reducing dog populations and rabies cases when implemented consistently and comprehensively (Totton et al., 2011; Reece & Chawla, 2006).
However, the success of these programs varies based on local implementation, resources, and community involvement. Improving the welfare of street dogs involves providing access to food, medical care, and shelter. Community engagement is vital, with residents playing a key role in feeding and caring for street dogs. Animal welfare organizations often conduct vaccination drives and medical camps to ensure street dogs receive necessary care. Public education campaigns are also crucial in fostering a humane attitude towards street dogs and reducing incidents of cruelty (Patronek et al., 2017).

Street dogs are vectors for zoonotic diseases, with rabies being the most significant concern. Vaccination is the only measure to prevent Rabies as it is a fatal disease. Effective rabies control programs have significantly reduced human rabies deaths in several regions (Cleveland et al., 2018). Other health risks from street dogs include parasites and bacterial infections, which can be mitigated through regular health check-ups and vaccinations (Hampson et al., 2015).

Stray dogs face numerous challenges that impact their survival and well-being. These animals are often subjected to harsh living conditions, including extreme weather, scarcity of food, and lack of medical care. Injuries from road accidents and fights with other animals are common, and untreated wounds can lead to severe infections or death. The legal protections in place, while robust, are often not enough to ensure their safety and welfare on a day-to-day basis (Ishika & Ishnavi, 2022).

### 2.2 Research Gap

The literature on managing street dogs, particularly through the Animal Birth Control (ABC) Programme, outlines various strategies and challenges. Nonetheless, there are specific gaps in the context of Delhi NCR that impede effective control and welfare of the stray dog population. Addressing these gaps is crucial for developing more effective and humane management practices.

One significant gap in the current literature is the inconsistent implementation of the ABC Programme across different regions within Delhi NCR. Although the programme aims to reduce the stray dog population through sterilization and vaccination, its success varies significantly depending on the local context. Studies have shown that the effectiveness of these programmes can be influenced by factors such as local resources, community involvement, and the efficiency of local authorities (Totton et al., 2011; Reece & Chawla, 2006).

However, there is a lack of localized studies that detail these discrepancies and offer tailored solutions for different municipal zones.

Moreover, there is a noticeable absence of comprehensive impact assessments that evaluate the long-term effectiveness of the ABC Programme in Delhi NCR. Most studies focus on short-term outcomes, such as immediate reductions in dog populations and rabies cases, but fail to consider the sustainability of these results over time. Longitudinal studies are necessary to provide a clearer picture of the programme's impact and to identify areas for improvement.

Another critical research gap is the lack of robust data collection and monitoring systems. Accurate and up-to-date data on the stray dog population, their health status, and the outcomes of ABC interventions are essential for assessing the programme's effectiveness. Currently, there is no centralized database or monitoring system in place, making it difficult to track progress and make informed decisions. Implementing such systems would allow for better planning and more effective management of the stray dog population (Patronek et al., 2017).

Community engagement and public awareness also represent significant gaps in the current approach to managing street dogs. Public awareness about the importance of stray dog population control, responsible pet ownership, and humane treatment of street dogs is insufficient. Effective methods for increasing public
knowledge and involvement in stray dog management initiatives need to be investigated. Enhancing community participation can play a crucial role in supporting sterilization efforts and encouraging the adoption of stray animals (Patronek et al., 2017).

The legal and policy framework governing stray dog management and animal welfare also requires attention. While legal protections are in place, they are often not effectively enforced, resulting in insufficient day-to-day safety and welfare for stray dogs. Research should examine the challenges in law enforcement and propose solutions to strengthen compliance and accountability (Ishika & Ishnavi, 2022).

Moreover, developing policies that address the root causes of stray dog overpopulation, such as improving waste management and enhancing urban planning, is essential. Policy interventions that complement the ABC Programme can provide a holistic approach to stray dog management.

Finally, there is a need for proactive strategies to mitigate human-canine conflicts. Current efforts are often reactive, dealing with conflicts as they arise rather than preventing them. Research is needed to develop proactive strategies, such as better urban planning and waste management, to prevent such conflicts from arising (Hampson et al., 2015).

Additionally, studies should explore measures to enhance public safety while ensuring humane treatment of street dogs, including developing guidelines for managing stray dogs in public spaces and during large events or summits (Cleveland et al., 2018).

**RESEARCH QUESTIONS**

1. What are dogs’ current living conditions in different regions of Delhi?
2. How do environmental factors impact the living conditions & health of stray dogs?
3. How do encounters with people, like residents and commuters, affect the daily habits and behavior of stray dogs?
4. How do health views affect what people think about stray dogs in Delhi NCR and how does this affect the way they treat these animals?
5. What are the reasons stray dogs get injured or sick and how do these incidents relate with people, traffic of environment?

**RESEARCH HYPOTHESIS**

1. Is there a significant impact on the living conditions & overall health of stray dogs due to environmental factors?
2. Is people interaction a significant factor in shaping the daily habits and behavior of stray dogs, potentially impacting their socialization, territorial behaviors, and ability to access resources?
3. When people think a certain way about stray dogs' health, it affects how they treat them. This can mean differences in care and access to vet services, which impacts the dogs' overall well-being. In crowded areas with lots of people and traffic, there are more risks for stray dogs getting hurt or sick because of what people do and dangers in the environment.

**3. RESEARCH METHODOLOGY**

This study utilizes a descriptive survey design to assess the living conditions and welfare of stray dogs in Delhi NCR. The Data was collected via a structured questionnaire distributed online to 42 residents from various regions of Delhi NCR. The survey included questions on demographics, frequency of encounters with stray dogs, perceptions of their living conditions, causes of injuries or illnesses, behavior, and interactions. Ethical approval was secured, and informed consent was obtained to ensure participant confidentiality.
4. DATA ANALYSIS

After analysing the gathered data, various insights have surfaced regarding the perceptions, interactions, and experiences concerning stray dogs in Delhi NCR.

Table 1: This data highlights the relationship between living conditions of stray dogs and it’s causes

<table>
<thead>
<tr>
<th>Your Locality (within Delhi NCR)</th>
<th>How would you rate the overall living conditions of stray dogs in your locality?</th>
<th>In your opinion, what are the primary reasons for stray dogs getting injured or sick? (Accidents involving vehicles, Physical altercations with other animals, Poor environmental conditions, Lack of proper healthcare)</th>
<th>Do you think environmental factors such as pollution and climate significantly impact the living conditions and overall health of stray dogs?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delhi (7.14%)</td>
<td>4.76% respondents rated 2 and 2.38% rated the conditions at 3</td>
<td>4.76% responded Accidents and 2.38% responded poor environmental conditions &amp; lack of health care</td>
<td>7.14% responded with yes</td>
</tr>
<tr>
<td>East Delhi (9.52%)</td>
<td>7.14% respondents rated the conditions at 3 and 2.38% rated it 1</td>
<td>2.38% responded Accidents, 2.38% responded accidents, poor environmental conditions &amp; lack of health care, 2.38% responded accidents &amp; poor environmental conditions and 2.38% responded lack of healthcare</td>
<td>9.52% responded with yes</td>
</tr>
<tr>
<td>Ghaziabad (2.38%)</td>
<td>2.38% respondents rated the conditions at 2</td>
<td>2.38% responded Accidents involving vehicles</td>
<td>2.38% responded with yes</td>
</tr>
<tr>
<td>Gurgaon (9.52%)</td>
<td>7.14% respondents rated the conditions at 2 and 2.38% rated at 3</td>
<td>2.38% responded Accidents, 2.38% responded accidents, poor environmental conditions, physical altercations &amp; lack of health care, 2.38% responded poor environmental conditions and 2.38% responded physical altercations with animals</td>
<td>9.52% responded with yes</td>
</tr>
<tr>
<td>Noida (2.38%)</td>
<td>2.38% respondents rated the conditions at 1</td>
<td>2.38% responded with all of the reasons</td>
<td>2.38% responded with no</td>
</tr>
<tr>
<td>North Delhi (4.76%)</td>
<td>4.76% respondents rated the conditions at 4</td>
<td>2.38% responded Accidents involving vehicle and 2.38% responded accidents, poor conditions &amp; lack of healthcare</td>
<td>4.76% responded with yes</td>
</tr>
<tr>
<td>Rohini (2.38%)</td>
<td>2.38% respondents rated the conditions at 2</td>
<td>2.38% responded accidents and lack of healthcare</td>
<td>2.38% responded with yes</td>
</tr>
<tr>
<td>South Delhi (33.33%)</td>
<td>14.29% respondents rated the conditions at 4 and 2.38% rated at 1</td>
<td>9.52% responded all of the reasons, other 9.52% responded lack of health care</td>
<td>33.33% responded with yes</td>
</tr>
<tr>
<td>West Delhi (28.57%)</td>
<td>14.29% respondents rated the conditions at 3 and 2.38% rated at 1 &amp; 4</td>
<td>7.14% responded lack of proper health care</td>
<td>23.81% responded yes and 4.76% responded no</td>
</tr>
</tbody>
</table>
Conclusion: (table1), the living conditions of stray dogs and the identified primary reasons for their injuries or illnesses differ across various localities within Delhi NCR. Moreover, environmental factors are recognized as significantly impacting the overall health and living conditions of these stray dogs. This data highlights the necessity for targeted interventions in specific areas, concentrating on improving healthcare, reducing accidents, and addressing environmental factors to enhance the welfare of stray dogs across Delhi NCR.

Table 2: This data indicates varying levels of interaction with stray dogs, perceptions of their behavior, and feelings of safety across different localities within Delhi NCR

<table>
<thead>
<tr>
<th>Your Locality (within Delhi NCR)</th>
<th>Have you ever interacted with stray dogs?</th>
<th>If yes, please specify the nature of your interaction (feeding, petting, avoiding)</th>
<th>How do you perceive the behaviour of stray dogs in your region? (Aggressive, friend &amp; harmless, neutral)</th>
<th>Do you feel safe around stray dogs in your region?</th>
<th>Do you believe interactions with people significantly shape the daily habits and behaviour of stray dogs, impacting their socialisation, territorial behaviour, and access to resources?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delhi (7.14%)</td>
<td>7.14% responded Yes</td>
<td>2.38% responded Avoiding, 2.38% responded feeding, petting &amp; avoiding and other 2.38% responded Petting</td>
<td>4.76% responded friendly &amp; harmless and 2.38% responded neutral</td>
<td>7.14% responded yes</td>
<td>7.14% responded yes</td>
</tr>
<tr>
<td>East Delhi (9.52%)</td>
<td>7.14% people responded Yes and 2.38% people responded No.</td>
<td>4.76% responded feeding, 2.38% responded petting and other 2.38% responded Avoiding</td>
<td>4.76% responded friendly &amp; harmless and 4.76% responded neutral</td>
<td>7.14% responded yes and 2.38% responded no</td>
<td>7.14% responded yes and 2.38% responded no</td>
</tr>
<tr>
<td>Ghaziabad (2.38%)</td>
<td>2.38% responded Yes</td>
<td>2.38% responded feeding</td>
<td>2.38% responded friendly &amp; harmless</td>
<td>2.38% responded no</td>
<td>2.38% responded yes</td>
</tr>
<tr>
<td>Gurgaon (9.52%)</td>
<td>9.52% people responded Yes</td>
<td>2.38% responded Avoiding, 2.38% responded feeding &amp; petting, 2.38% responded petting and 2.38% responded all</td>
<td>7.14% responded neutral and 2.38% responded friendly &amp; harmless</td>
<td>9.52% responded yes</td>
<td>9.52% responded yes</td>
</tr>
<tr>
<td>Location</td>
<td>Yes (2.38%)</td>
<td>No (2.38%)</td>
<td>Aggressive &amp; Threatening (2.38%)</td>
<td>Neutral &amp; Harmless (2.38%)</td>
<td>Yes (2.38%)</td>
</tr>
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</tr>
<tr>
<td>Noida (2.38%)</td>
<td>2.38%</td>
<td>2.38%</td>
<td>2.38% responded yes</td>
<td>2.38% responded no</td>
<td>2.38%</td>
</tr>
<tr>
<td>North Delhi (4.76%)</td>
<td>4.76%</td>
<td>4.76%</td>
<td>4.76% responded yes</td>
<td>4.76% responded no</td>
<td>4.76%</td>
</tr>
<tr>
<td>Rohini (2.38%)</td>
<td>2.38%</td>
<td>2.38%</td>
<td>2.38% responded yes</td>
<td>2.38% responded no</td>
<td>2.38%</td>
</tr>
<tr>
<td>South Delhi (33.33%)</td>
<td>26.19%</td>
<td>7.14%</td>
<td>23.81% responded yes</td>
<td>23.81% responded no</td>
<td>33.33%</td>
</tr>
<tr>
<td>West Delhi (28.57%)</td>
<td>26.19%</td>
<td>2.38%</td>
<td>11.90% responded no</td>
<td>21.43% responded yes</td>
<td>26.19%</td>
</tr>
</tbody>
</table>

Conclusion: The survey data (table 2) reveals that most respondents in South Delhi and West Delhi frequently interact with stray dogs, mainly through feeding and petting, indicating a generally positive relationship. Stray dogs are perceived as friendly and harmless in most localities, though there are concerns about aggressive behavior in Noida. While most residents feel safe around stray dogs, there are notable exceptions in Noida and Ghaziabad. Many respondents believe that human interactions significantly influence stray dogs’ behavior and access to resources.
Table 3: This data indicates about the awareness and support for stray dog welfare across various localities within Delhi NCR.

<table>
<thead>
<tr>
<th>Your Locality (within Delhi NCR)</th>
<th>Are you aware of any healthcare services available for stray dogs?</th>
<th>Would you support initiatives aimed at improving the welfare of stray dogs? on a scale of 1-5, where 1 means No support and 5 means highly support</th>
<th>Do you believe that people's perceptions about stray dogs' health significantly influence how they treat them, resulting in variations in care and access to veterinary services, which ultimately impact the overall well-being of the dogs?</th>
<th>Do you think environmental factors such as pollution and climate significantly impact the living conditions and overall health of stray dogs?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delhi (7.14%)</td>
<td>7.14% responded with no</td>
<td>2.38% responded 2, 4 &amp; 5</td>
<td>7.14% responded with yes</td>
<td>7.14% responded with yes</td>
</tr>
<tr>
<td>East Delhi (9.52%)</td>
<td>4.76% responded with yes and 4.76% responded with no</td>
<td>4.76% responded 4 and 2.38% responded 2 &amp; 5</td>
<td>9.52% responded with yes</td>
<td>9.52% responded with yes</td>
</tr>
<tr>
<td>Ghaziabad (2.38%)</td>
<td>2.38% responded with no</td>
<td>2.38% responded 5</td>
<td>2.38% responded with yes</td>
<td>2.38% responded with yes</td>
</tr>
<tr>
<td>Gurgaon (9.52%)</td>
<td>7.14% responded with no and 2.38% responded with yes</td>
<td>4.76% responded 5 and 2.38% responded 3 &amp; 4</td>
<td>9.52% responded with yes</td>
<td>9.52% responded with yes</td>
</tr>
<tr>
<td>Noida (2.38%)</td>
<td>2.38% responded with yes</td>
<td>2.38% responded 5</td>
<td>2.38% responded with yes</td>
<td>2.38% responded with yes</td>
</tr>
<tr>
<td>North Delhi (4.76%)</td>
<td>4.76% responded with yes</td>
<td>4.76% responded 5</td>
<td>4.76% responded with yes</td>
<td>4.76% responded with yes</td>
</tr>
<tr>
<td>Rohini (2.38%)</td>
<td>2.38% responded with yes</td>
<td>2.38% responded 5</td>
<td>2.38% responded with yes</td>
<td>2.38% responded with yes</td>
</tr>
<tr>
<td>South Delhi (33.33%)</td>
<td>19.05% responded with yes and 14.29% responded no</td>
<td>21.43% responded 5 and 2.38% responded 1</td>
<td>30.95% responded with yes and 2.38% responded no</td>
<td>33.33% responded with yes</td>
</tr>
<tr>
<td>West Delhi (28.57%)</td>
<td>19.05% responded no and 9.52% responded yes</td>
<td>16.67% responded 5 and 2.38% responded 3</td>
<td>28.57% responded yes</td>
<td>23.81% responded yes and 4.76% responded no</td>
</tr>
</tbody>
</table>

Conclusion: (table 3) The awareness of healthcare services for stray dogs is limited, with the highest awareness in South Delhi and West Delhi. Support for initiatives to improve stray dog welfare is generally high, especially in South Delhi and West Delhi, where many respondents rated their support at the highest level (5). A significant majority of respondents across all localities believe that people's perceptions of stray dogs' health influence their treatment and access to veterinary services. Additionally, most respondents agree that environmental factors like pollution and climate significantly impact the living conditions and health of stray dogs.
5. CONCLUSION

The survey data confirms two key hypotheses: firstly, that environmental factors significantly impact the health and living conditions of stray dogs in Delhi NCR, highlighting the need for targeted interventions to address pollution, climate, and other environmental challenges. Secondly, it underscores the role of human interaction in shaping the behavior and welfare of stray dogs, emphasizing the importance of responsible interactions to promote socialization and access to resources. Overall, addressing environmental hazards and fostering positive human-dog interactions are crucial for improving the welfare of stray dogs across the region.

6. REFERENCES


7. APPENDIX

Survey Questionnaire

Hi! I'm Ayushi Dhakad, first year postgraduate student at Pearl Academy, Delhi, studying Communication Design and Technology. I'm conducting a research survey on "Improving the living conditions of stray dogs in Delhi NCR". I'd greatly appreciate your participation, Your responses will be confidential. This survey will only take about 5 minutes.

Thank you for your valuable time!

Gender *

- Male
- Female
- Others
Your Locality (within Delhi NCR) *

Short answer text

Occupation *

- Student
- Salaried
- Professional
- Business
- House woman

Are you currently working with any animal welfare organisations? *

- Yes
- No

How often do you encounter stray dogs in your locality? *

- Multiple times a day
- Once a day
- A few times a week
- Rarely
- Never

How would you rate the overall living conditions of stray dogs in your locality? *

1 2 3 4 5

- Poor
- Excellent

In your opinion, what are the primary reasons for stray dogs getting injured or sick? *

- Accidents involving vehicles
- Physical altercations with other animals
- Poor environmental conditions
- Lack of proper healthcare
How do you perceive the behaviour of stray dogs in your region?

- Friendly and harmless
- Neutral
- Aggressive and threatening

Have you ever interacted with stray dogs?

- Yes
- No

If yes, please specify the nature of your interaction (select all that apply)

- Feeding
- Petting
- Avoiding

Do you feel safe around stray dogs in your region?

- Yes
- No

Do you believe local Govt. & Non Govt. authorities are effectively managing the stray dog population in your area?

- Yes
- No

Would you support initiatives aimed at improving the welfare of stray dogs?

- Strongly Oppose
- 0
- 1
- 2
- 3
- 4
- 5
- Strongly Support
Are you aware of any healthcare services available for stray dogs?

- Yes
- No

Do you think environmental factors such as pollution and climate significantly impact the living conditions and overall health of stray dogs?

- Yes
- No

Do you believe interactions with people significantly shape the daily habits and behaviour of stray dogs, impacting their socialisation, territorial behaviour, and access to resources?

- Yes
- No

Do you believe that people's perceptions about stray dogs' health significantly influence how they treat them, resulting in variations in care and access to veterinary services, which ultimately impact the overall well-being of the dogs?

- Yes
- No