

# IMPACT OF STRAY ANIMALS ON PUBLIC HEALTH AND SAFETY IN PUNJAB

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**ABSTRACT:** With the rapid urbanization, the increasing population of stray animals has become a serious social problem in the cities of Punjab. There are several causes for the rise in the number of stray animals in the state. The present research is an attempt to identify the reasons for increasing population of stray animals in the region and then to study the impact of stray animals on public health and safety. An effort would be made to bring out various solutions for the management of stray animals in the light of research results.

**Keywords:** Stray Animals Problem, Population Control, Rabies, Spay and Neuter

## 1.1 INTRODUCTION

The cattle, dogs, cats and donkeys that do not have any owner and wander across the road or other public places and having no shelter are called stray animals. As residents of the same planet, human and animals have always coexisted. While some people like to romanticize about the harmonious and peaceful coexistence between humans and animals in early history, but in reality, conflict between the two had been omnipresent (Singh, 2013). Human Animal Conflict includes both competition and predation and takes many forms like crop-raiding, livestock predation, human injury or death (Knight, 2000). According to the National Institute of Communicable Diseases Delhi, almost all the cases of rabies in India are due to stray dogs, which act as a reservoir for the disease and the state of Punjab is no exception for the same.

## 1.2 STRAY ANIMALS IN PUNJAB

Freely roaming dogs and cows/bulls are a common site in the state of Punjab. Many persons feed and care for stray animals in their neighborhood, but others consider them a threat. The increasing number of these animals has become a menace in the state as they are leading to frequent road accidents. In winters, the stray animals roaming on the highways amid poor visibility due to dense blankets of fog have become a frequent cause of accidents.

Livestock Census started in our country in the year 1919 and since then the process has been continuing on quinquennially basis. The Livestock Census is conducted by “Ministry of Agriculture & Farmers Welfare Department of Animal Husbandry, Dairying & Fisheries” Government of India. So far 19 Livestock Census had been conducted and the last census was held in the year 2012. All States/UTs participated in the census work and completed it in shortest time. The census was conducted simultaneously in all rural and urban areas of the States/UTs including inaccessibility areas on account of topography, weather conditions or severe administrative problems and defense establishments. It was the first time in 19<sup>th</sup> Livestock Census that information regarding stray cattle and stray dogs was collected. The information on approximate number of stray cattle and stray dogs were collected from a single source in the village/ward, such as Sarpanch/other panchayat member or patwari or teacher or other knowledgeable person. Table 1.1 is showing the number of stray cattle and dogs in Punjab as per the 19<sup>th</sup> Livestock Census-2012.

**Table: 1.1 Number of Stray Cattle and Dogs in Punjab**

Category	Stray Cattle	Stray Dogs
Rural	81728	256178
Urban	19623	49304
<b>Total</b>	<b>100991</b>	<b>305482</b>

**Source:** 19<sup>th</sup> Livestock Census-2012 All India Report (<http://www.husbandrypunjab.org>)

As per the “19<sup>th</sup> Livestock Census-2012 All India Report” the livestock population has increased substantially in Punjab with 9.57% from 2007 to 2012. It is evident from the table 1.1 that in the year 2012 there were total 1,00,991 stray cattle including 81,728 in rural areas and 19,623 in urban areas, whereas as per census total number of stray dogs in the state was 3,05,482 including 2,56,178 in rural areas and 49,304 in urban areas.

Increasing number of stray animals is a threat to human society. Stray dogs and cows/bulls are an absolute nuisance to the society. They litter anywhere, chase, bite, maul humans and children and dogs create sound pollution by continuous barking throughout day and night. On the one hand, people are killing harmless animals in the name of food while on the other, nurturing stray dogs. Most dog lovers are non-vegetarian and do not raise any voice against killing of other harmless animals. They kill poultry to feed dogs and ridiculously call themselves animal lovers. Over one lakh people were bitten by dogs in Punjab last year, many of whom were mauled to death while the rest scarred for life. Table 1.2 is showing data regarding the number of dog bite cases in Punjab from 2014 to 2018.

**Table: 1.2 Year wise Dog Bite Cases in Punjab**

Year	Bite Cases( In Lakhs)
2014	22000
2015	39000
2016	54000
2017	1,12000
2018	1,13000

**Source:** National Rabies Control Program (nhp.gov.in)

Data available with the National Rabies Control Programme (NRCP) showed that 22,000 cases of dog bites were reported in the state in 2014, which went up to 39,000 in 2015 and it further jumped to 54,000 in 2016. However, the real shock came in 2017 when the number of dog bite cases doubled to 1,12,000 in the state. The same story repeated itself in 2018 when 1,13,000 cases were reported. The number of stray dog attacks recorded in the state over the last couple of years shows an exponential rise in canine-related attacks in comparison with the numbers registered in 2014, 2015 and 2016. In fact, cases of dog bites in the state have been rising gradually since 2014.

According to state government data, 50 per cent of the dog bite victims in the state are children. Since the records are based on hospital entries, there are chances that the number of dog bite cases could be way more. The number may be higher as not all victims seek treatment at hospitals and all the cases are not on records (www.tribuneindia.com). Table 1.3 is containing the data regarding the worst hit districts of dog bites in the state.

**Table: 1.3 List of Worst–Hit Districts of Dog Bites in Punjab**

District Name	Bite Cases
Ludhiana	15,324
Patiala	9,936
Jalandhar	9,839
Hoshiarpur	9,260
Sangrur	6,593

**Source:** National Rabies Control Program (nhp.gov.in)

It is evident from the data that Ludhiana has highest number with 15,324 cases of dog bites, Meanwhile, Jalandhar (9,839), Hoshiarpur (9,260) and Sangrur (6,593) are some of the other districts that faced severe problems due to stray dog menace. It is important to mention here that these are reported cases which are on government records, a large number of cases remain unreported hence the real figure can be much more than it.

### 1.3 REVIEW OF LITERATURE

In this part of study, an endeavor has been made to provide an overview of various aspects and issues related to the present research work. In order to have an in-depth understanding of the research topic, several studies on stray animals associating to their management, problems and their habitat have been reviewed. The studies are reviewed with a view to understand the objectives, research methodology, research findings etc. and to identify the hiatus between the existing literature and the present study. A number of researches on national and international levels are studied, reviewed and summarized as under.

**Villa et al. (2001)**, in research work named “Free-roaming dog (FRD) control among OIE-member countries” states Free-roaming dogs are a global problem involving countries of all degrees of economic development, but especially poor countries. In less-developed countries, they tended to employ killing methods, that are not recommended on animal-welfare grounds. Dog shelters are important tools in the control of FRD populations, particularly where euthanasia is limited and many tools are being used to deal with it.

**Ugboko et al. (2002)**, in research “Facial injuries caused by animals in northern Nigeria” suggest the wearing of protective glasses and coagulation of the new-born calf’s horns to forestall such accidents. The necessitated close interaction of cattle rearer with animals like such as cats, camel, cows, horses, pigs, and donkeys, among tend to cause facial injuries during agricultural activities, mainly children are the victims. The health education authorities must ensure sustainable compliance in the use of protective glasses by cattle rearer.

**khokhar (2003)**, in work named “Profile of dog bite cases attending M.C.D. dispensary at Alipur, Delhi” explains that children are the most frequent victim of freely roaming stray dog bites. Prevention of dog bite injuries and their management needs to include a variety of approaches. Local treatment of the wound right after a bite is an important and this is highly lacking. An expectant guidance by the parents and the teachers is the need of the hour in case of young children as victims.

**Reese (2005)**, in research article “Dogs and Dog Control in Developing Countries” embarked that the human population is subjected to minor problems by a large free-roaming dog population, including noise and environmental soiling by ordure, and to some major public health issues, such as rabies, from which thousands of people die every year, mainly in developing countries. The control over rabies is possible and that control measures adopted must be suitable to the society and situation in which they are applied.

**Cliquet et al. (2007)**, in research “The safety and efficacy of the oral rabies vaccine SAG2 in Indian stray dogs” notifies that there is a great need to control rabies in dogs, which are responsible for virus transmission. SAG2 (Avirulent-Gif Street Alabama Dufferin) vaccine is the first anti-rabies oral vaccine registered in India. This vaccination induced a complete protection in dogs after a highly virulent rabies challenge which killed all controls.

**Ramanujan (2007)**, in research entitled “Violent Encounters: ‘Stray’ Dogs in Indian Cities” presented a large-scale massacre of street dogs in the southern Indian state of Karnataka in 2007. Between January and April, under pressure from citizens and the media, following the deaths of two children, the municipality brutally trapped thousands of dogs, dumped them in packed shelters or vans without sufficient food or water, sometimes for several days, and then poisoned or electrocuted them. The moral panic surrounding street dogs, largely produced and amplified by press coverage. It resulted in sporadic and clandestine killings of stray dogs.

**Menezes (2008)**, in his research article named “Rabies in India” examines that Rabies is epidemic in India. It is being eradicated in many countries but every year millions of people suffer from this disease due to bites by stray animals. To reduce the deaths from rabies, it needs an integrated effort of legal authorities and public health officials. Certain measures like vaccination of animals to eliminate infection and birth control, creating awareness through public health programs is the need of the hour.

**Rani et al. (2009)**, in research “Injuries by Bull Horns: Patterns and Prevention Protocols” reveals that the maximum numbers of injuries are sustained in rural people while rearing the cows and bulls, during feeding, while tying them or milking the cows or buffaloes. Researchers advise wearing helmets and steel-toed boots as a simple and important safety strategy to prevent bull gore injuries. Dehorning can be encouraged when the calf is two months to two years old. In addition, traffic police should be directed to keep stray cattle away from road dividers and busy sections of the roads thus minimizing attacks.

**Fielding and Mather (2010)**, in research article “Stray Dogs in an Island Community: A Case Study From New Providence, The Bahamas” proposes the free spay and neuter programs of nongovernmental organizations to be encouraged and increased so that the operations are accessible to all dog owners. Residents have a high tolerance to free-roaming dogs. It is required to devise a scientific control strategy that will be both effective and economic.

**Hsu et al. (2010)**, in research named “Dog Keeping in Taiwan: Its Contribution to the Problem of Free-Roaming Dogs” embarks that low rates of neutering, easy availability of low- or no-cost puppies, a tendency to allow owned dogs free access to the outdoors, unrealistic expectations of dog ownership, canine behavioral problems, and religious and cultural taboos against euthanasia and shelter relinquishment have contributed to the recent increase in the numbers of free-roaming dogs in Taiwan. Some Taiwanese shows resistance to canine euthanasia and willing to provide shelter to free roaming dogs, giving a way for reducing the existing free-roaming dog population.

**Totton et al. (2011)**, in the research paper “Stray dog population health in Jodhpur, India in the wake of an animal birth control (ABC) program” examines that surgical sterilization can be seen as best birth control remedy in stray dogs. Sterilization results dogs to roam less, expend less energy, decreased metabolic rate occurring with the loss of reproductive hormones. Sterilization further results higher prevalence of skin conditions. It is suggested that the dogs and the environment at the ABC facility needs to be treated using effective tick control protocols.

**Voslarva and Passantino (2012)**, research “Stray dog and cat laws and enforcement in Czech Republic and in Italy” states increasing animal population control is a complex issue and emerging certain serious health issues for human health in EU countries. Proposed strategies such as licensing, public education, adequate funding, close involvement of veterinarians and of official veterinary services, working in collaboration with universities, public health authorities (national and regional government), animal welfare associations are the requirements of managing conditions leading to sustainable outcomes.

**Singh et al. (2013)**, in research work entitled “Veterinary urban hygiene: a challenge for India” explains that the canine population has increased along with the human population because lack of control measures such as impounding stray animals and euthanasia. It further causes unhygienic conditions in urban areas causing disease among human and animals, proving fatal. To improve veterinary-related hygiene in urban areas and to accelerate livestock production operations, there is a vigil requirement to develop science-based strategies enforced through strict regulations.

**Dias (2013)**, in research “Size and spatial distribution of stray dog population in the University of São Paulo campus, Brazil” notifies that stray dogs in the university campus needs to be monitored so that they can't harm people inside. To achieve this objective, public policies can be framed along with the helping hand from volunteers, visitors, the university community and researchers.

**Ghatak and Singh (2015)**, researched “Veterinary public health in India: current status and future needs” states that due to high population density, the re-emergence of zoonotic pathogens, environmental pollution and antimicrobial resistance, it urges the need for the development of VPH (Veterinary public health) in India. Although VPH does not have a conventional status in India yet efforts are being made by the official medical authorities to promote functional VPH service to supplement the overall healthcare infrastructure in the country.

**Kumar and Paliwal (2015)**, in scientific correspondence “Feral dogs of Spiti Valley, Himachal Pradesh: an emerging threat for wildlife and human life” reveals that there is lack of administrative support in the valley to control the frequent reproduction of dogs, leading to over population resulting into dog-human conflicts, such as dog bites, road traffic accidents, inconvenience due to their escalated fights, blind chasing of one another on roads and barking. Feral dogs are causing a serious threat to wildlife in Spiti Valley. Contraceptives and sterilants are used owing to cost-effectiveness, convenience and social acceptability over surgical sterilization for dog population control. Woefully, in Spiti Valley such facilities are almost minimal.

**Kamble et al. (2016)**, in research “Knowledge, attitude and practices related to animal bites among the residents of an urbanized village in south Delhi” assess knowledge, attitude and practices related to animal bite among the residents via cross-sectional study. Seventy five percent of the people in Aliganj have heard of rabies. The results indicate the need to use the mass media to spread awareness about first aid. Health education through anti-rabies campaigns must be provided especially to children for protecting themselves from rabies. Some people are required to bring about positive attitude and awareness about the importance of consulting a qualified doctor and vaccination to prevent rabies.

**Fraser and MacRae (2016)**, in research named “Four Types of Activities that Affect Animals: Implications for Animal Welfare Science and Animal Ethics Philosophy” investigates four types of activities that affect animals' life. In Type 1 activities (keeping animals), people care for animals keep them in shelters. In Type 2 activities (deliberate harm), people intentionally harms animals results in animal suffering. Type 3 activity motivate people to recognise and avoid intentional harms, and to find less harmful ways of achieving human goals. Type 4 activities, involves recognizing commonalities between animal welfare, conservation and human well-being. The traditional focus is on Type 1 and 2 activities rather it needs to include Type 3 and 4 activities, especially as animals increase with human population growth.

**Sharma and Shah (2016)**, in research named “A Practical Animal Detection and Collision Avoidance System Using Computer Vision Technique” suggest a simple warning system, efficient automatic animal detection and a low-cost approach for automatic animal detection on highways for preventing animal-vehicle collision using computer vision techniques. The proposed method can alert the driver when the vehicle speed is up to 35 km/h. Though the system is tested on Indian highways but also can work in other countries.

**Otranto et al. (2017)**, in research “Zoonotic Parasites of Sheltered and Stray Dogs in the Era of the Global Economic and Political Crisis” states that sheltered and stray dogs acts as vectors and badly affects public health when they are shifted from one place to another. Further the adequate treatments and preventive measures for such diseased animals is not the priority for the public health and veterinary organizations. Spay-neuter programs are suggested and encouraged to limit the overpopulation and euthanasia of unwanted and diseased dogs.

**Rojas et al. (2018)**, in research work named “Teaching animal welfare in veterinary schools in Latin America” explains the current drives of change on the importance of teaching animal welfare. Researcher emphasized the need of introducing animal welfare in veterinary training programs and has proposed some approaches regarding the criteria, contents and concepts of animal welfare training.

**Arya et al. (2019)**, in research “Circadian variations in foraging and resting/standing activity patterns of stray street cattle of urban Sambalpur, Odisha, India” describe that street cattle is attributed to urban development and reduction in the size of grazing land area in and around the towns and cities. The street cattle contribute significantly to spread of disease, traffic congestion and occurrence of road accidents.

#### 1.4 RESEARCH GAP

It has been observed from the detailed literature review that there are numerous studies conducted on stray animals all over the world. The studies reviewed pertain to various aspects of stray animals like problems of freely roaming dogs, spread of disease due to dogs, technology to track stray animals, rising animal violence, administrative responsibilities to tackle stray animals around the globe etc. As far as state of Punjab is concerned, it has been noticed that there is negligible research on the stray animals. There is hardly any study on stray animals in the state in recent past. Hence there exists a research gap and the present study is an attempt to answer the following questions.

- What are the reasons for increasing number of stray animals in the state?
- What is the impact of stray animals on public health and safety?

#### 1.5 RATIONAL OF THE STUDY

Human and animals have coexisted on the planet earth for ages. Conflict between humans and animals is not new rather it is omnipresent. The damage and destruction caused by a variety of animals to human property and sometimes to human life is a real and significant danger to human communities. Limitless increase in the stray dogs and cows population is a cause of concern for the state government. It is an unpleasant scene to witness stray dogs roaming and sleeping freely in the colonies, streets, shopping centers and also inside/ outside tourist places. It leads to create a depressing image of the local administration in the state. Therefore there is an urgent need to resolve the issue of stray animals to protect public health. Hence the present study “*Impact of Stray Animals on Public Health and Safety in Punjab*” is an attempt to get deep insights into the problem and to suggest suitable remedies to get effective solutions for the same.

#### 1.6 OBJECTIVES OF THE STUDY

- To study the reasons for increasing number of stray animals in the state.
- To study the impact of stray animals on public health and safety.
- To make suggestions for the management of stray animals based on the research outcomes

#### 1.7 RESEARCH METHODOLOGY

To achieve the conceived objectives of the study mainly, secondary data has been used. To study the reasons for increasing number of stray animals, the information has been gathered from various stakeholders through an informal oral interview. Whereas to study the, impact of stray animals, the records of animal attacks are taken from print and electronic media and included in the study. To meet the further requirements of secondary data, various books, journals, articles as well as on line data resources have been used.

#### 1.8 REASONS FOR INCREASING NUMBER OF STRAY ANIMALS IN PUNJAB

The rising number of stray dogs and cattle has become a serious problem in the state. The number of stray animals continues to rise because of various reasons, which are mentioned as under

- One of the main reasons for increasing the number of stray animals is the rise in human population resulted in continues loss of natural habitats. Habitat destruction has created a competition between humans and animals for limited space and resources.
- The second root cause is the open garbage on the road sides that encourages stray dog population. Stray dogs are scavengers, so they rely on garbage on the roads as a source of food.
- One more reason for rise in the number of stray cattle is the unplanned dairies, inside the city. Usually the owners, after milking the cow leave them loose so that they can graze in the surroundings.
- One more prominent reason of increasing number of stray animals is pet abandonment. People abandon their domestic and pet animals due to several reasons like medical problems of animals, increasing cost of pet ownership, lifestyle changes, housing problems and many more.
- Many a time farmers dump their cattle which become useless for them. Several farmers leave their useless animals during cattle fairs.
- Uncontrolled breeding amongst street animals also resulting in increasing their population.
- Due to the attacks of cow vigilantes, the bovine traders are not taking bulls and cows, which have completed their age of lactation, forcing the villagers to set them free in cities. The number of stray bulls and cows has increased many-fold in the entire state.

### 1.9 IMPACT OF STRAY ANIMALS ON PUBLIC HEALTH AND SAFETY

Human life is precious and should be saved at any cost. Stray animals roaming around freely in the cities have become a serious menace. Several lives have already been lost and many have been injured due to accidents involving stray cattle and dogs. Stray dogs provoke spread of disease, inflicting wounds on people, damaging property, creating a hazard on roads and excessive noise (Carding,1969) . Groups of stray dogs could be witnessed roaming in the streets and the situation is worst during nights when most of the people fall prey to their attack.

Stray and roaming dogs and cows/bulls are usually not cared for and often carriers of diseases. Many diseases of animals are highly contagious like rabies and leptospirosis are well known while other diseases are not so commonly recognized. When certain stray dogs bite humans, they infect those people with rabies, a viral disease that causes acute inflammation of the brain. Stray animals are usually seen roaming in and around the residential areas and also on roads. Sometimes, the animals appear all of a sudden on the roads, jeopardizing the lives of those riding motorbikes and other vehicles. Several mishaps have proved fatal, resulting in the loss of precious lives. A number of cases are reported in routine regarding stray cattle attacks and injuring people on the roads. Besides, many people sustain injuries in the accidents. Apart from the internal roads, a large number of stray animals can be seen roaming on highways. People travelling on national highways are always at the risk of meeting with an accident due to these stray animals. The risk of accidents increases manifold during the foggy days and at night as it becomes very difficult for drivers to spot stray animals. A number of news on the print and electronic media shows that the stray animals have become a severe public administration issue in the villages and cities of the Punjab.

**Table 1.4 Prints and Electronic Media News of Stray Animal Attacks in Punjab**

Date	Incidence	Source
29/08/2016	Stray bull runs amok in Patiala, kills one, injures another. A stray bull killed a man by piercing his eyeball and puncturing his lungs and kidneys with his horns, here on Sunday. Another person, who also came under the bovine's attack, has sustained injuries and is admitted at a hospital.	<a href="https://www.hindustantimes.com/punjab/stray-bull-runs-amok-in-patiala-kills-one-injures-another/story-Uo59M6hAkS1VHToFLwUAjJ.html">https://www.hindustantimes.com/punjab/stray-bull-runs-amok-in-patiala-kills-one-injures-another/story-Uo59M6hAkS1VHToFLwUAjJ.html</a>
08/07/2017	Dogs mutilated four-year-old Harman Singh of Bishangarh village in Sanaur, and he had to undergo plastic surgery of the face. The child was attacked by a group of dogs. Two students were injured in Patran when they were attacked by dogs. They were on way to their school.	<a href="https://www.hindustantimes.com/punjab/canine-terror-in-patiala-31-dog-bite-cases-every-day/story-gI7E1bM7Cl6iDSOpKH9TjP.html">https://www.hindustantimes.com/punjab/canine-terror-in-patiala-31-dog-bite-cases-every-day/story-gI7E1bM7Cl6iDSOpKH9TjP.html</a>
13/10/2017	Stray dog attacks 15, killed by mob. A stray dog unleashed terror on the Bathinda Road here today. It mauled 15 persons, including some senior citizens. The dog was later killed by the mob and the municipal authorities took the carcass away from the road.	<a href="https://www.tribuneindia.com/news/punjab/stray-dog-attacks-15-killed-by-mob/481649.html">https://www.tribuneindia.com/news/punjab/stray-dog-attacks-15-killed-by-mob/481649.html</a>
20/05/2018	7-year-old boy mauled by stray dogs in Sangrur	<a href="https://timesofindia.indiatimes.com/city/chandigarh/punjab-7-year-old-boy-mauled-by-stray-dogs-in-sangrur/articleshow/64245997.cms">https://timesofindia.indiatimes.com/city/chandigarh/punjab-7-year-old-boy-mauled-by-stray-dogs-in-sangrur/articleshow/64245997.cms</a>
18/06/18	Stray dogs maul toddler to death in Chandigarh. The 18-month-old boy was playing with elder siblings when he was attacked by pack of four stray dogs around noon.	<a href="https://www.hindustantimes.com/punjab/stray-dogs-maul-toddler-to-death-in-chandigarh/story-i0nQtnfGdZae9w56GQyWOP.html">https://www.hindustantimes.com/punjab/stray-dogs-maul-toddler-to-death-in-chandigarh/story-i0nQtnfGdZae9w56GQyWOP.html</a>
29/10/2018	5-year-old girl dies after dogbite in Ludhiana, parents lodge complaint with MC. Parents came to know about the dogbite when their child started showing symptoms of rabies	<a href="https://www.hindustantimes.com/punjab/5-year-old-girl-dies-after-dogbite-in-ludhiana-parents-lodge-complaint-with-mc/story-ygyICbfXrLk0bodjp59BL.html">https://www.hindustantimes.com/punjab/5-year-old-girl-dies-after-dogbite-in-ludhiana-parents-lodge-complaint-with-mc/story-ygyICbfXrLk0bodjp59BL.html</a>
12/11/2018	Ajmer Singh of Bhikhi Town, a farmer hit by a stray cattle in the grain market. The 60-year-old was in the grain market to sell paddy crop. Farmers said Ajmer saw stray cattle destroying his crop. When he tried to drive them away, they attacked and killed him.	<a href="https://timesofindia.indiatimes.com/city/amritsar/cultivator-dies-in-stray-cattle-attack/articleshow/66585145.cms">https://timesofindia.indiatimes.com/city/amritsar/cultivator-dies-in-stray-cattle-attack/articleshow/66585145.cms</a>
16/03/2019	A stray dog went on a rampage, mauling a two-year-old boy besides biting seven people, including four children, at two colonies on Patiala Road in Zirakpur	<a href="https://www.hindustantimes.com/chandigarh/stray-dog-goes-on-biting-spree-in-zirakpur-attacks-8-people-including-kids/story-b5rExU9DDz6sz8I0bZEW4K.html">https://www.hindustantimes.com/chandigarh/stray-dog-goes-on-biting-spree-in-zirakpur-attacks-8-people-including-kids/story-b5rExU9DDz6sz8I0bZEW4K.html</a>

As it is evident from the information contained in table 1.4 that every second day, print and electronic media have news with photographs showing dog bite victim specially small children with their entire face and other body parts having blood, injuries and so many stitches. Even adults walk with such terror as if they are in the midst of some forest expecting a wild animal to attack. Many a times, suddenly some pack starts chasing and barking bikers and walkers for no reason. Often people are in a situation when they are driving down a road and a cow comes in front of them and it might a collusion leading to severe injuries both animal and humans and moreover if they escape for hitting, the cow is not interested in moving despite people blowing horn repeatedly. It is scary to take a different road in night as there may be a pack of 10-15 street dogs chasing, barking and attacking you. Moreover the street dogs litter in front of main gate of houses in colonies and on the way leading leading to an unhygienic environment.

### 1.10 FINDINGS OF THE STUDY

It is evident from the results that stray animals have many negative impacts on social life, health and environment. Cattle blocking traffic on busy stretches across the cities are common sight. There are many cases of accidents due to stray cows/bulls

and frequent traffic jams due to their presence on a busy road full of traffic. The stray cattle also nap on busy roads, block traffic and again cause traffic jams and accidents. Stray dogs are no less menace than the stray cows, the pack of 6-7 dogs, often erupting into fights, barking incessantly at pet dogs taken out for walks, lingering around kids play areas in packs, chasing vehicles on the main roads. Most of these dogs have never been vaccinated and there is a chance of getting rabies if these dogs bite any passerby. It is evident from the data that the dog bite cases in the state have increased as no measures have been taken to tame the stray dogs, which are a terror in almost all the areas.

Canine menace is increasing day by day creating problems for those venturing out into streets. Main reason for the menace is open garbage in streets. Stray dogs scavenge on garbage. Nowadays, the population of stray animals in Punjab is increasing at break-neck speed. Every day one can hear cases of dog bites and cow/bull attacks. Stray dog menace has reached an alarming stage. Many children are bitten by stray dogs and receive serious injuries. The residents of the state are struggling with the problem of stray animals.

### 1.11 SUGGESTIONS OF THE STUDY

Dogs and cows freely roam in streets, markets and even near religious places in Punjab. Often the children and old people become victims of these stray animals as both are more defenseless to dog and cow attacks.. Sincere efforts should be made to shift dogs to an isolated place. For this, the state administration should relocate stray dogs to pounds set up on the regional basis. The public should be more cautious in this regard. Extra care should be taken of children and elderly. People should be aware about steps to be taken in case a dog bites.

- To resolve the issue of stray animals in the state, the government authorities must have a sound and timely collected database about stray animals population. The conduct of stray animals survey is thus essential for making plans for the management of strays in the state.
- There should be a separate provision of funds in the state budget for managing the stray animals in Punjab and the government should fix the responsibility of a particular department to deal the menace with special mechanism.
- Arrangements are required to handle complaints about the behavior issues and quick dispatch teams should be there to capture the aggressive animals.
- To Control breeding, spaying and neutering the animal is the best thing that one can do to prevent stray overpopulation. The key is to prevent the problem before it begins. Spay and neuter procedures are common surgeries performed by veterinarians while the pet is under anesthesia. Female animals are spayed by removing their ovaries and uterus, and male animals are neutered by removing their testicles.
- Government should make arrangements for routine programs of spay and neuter. The department should always be ready to provide low-cost spay and neuter programs to the stray handled by free lancers in the state.
- The license of a dairy or cattle shed should be cancelled in case the cattle belonging to it strays out of its premises. The water and power supply to illegal dairies must be disconnected. Also, the stray cattle owners who let their cattle roam the city streets freely must be warned and fined suitably. Once impounded, these should be released only with a fine of minimum Rs. 5,000 per animal. The money, thus, raised can be used to maintain the cattle pounds and also pay for the cattle catchers.
- Land should be allotted for constructing dog pound. The authorities should make shelters for stray dogs. Its cost can be covered by fund-raising campaigns. There should be a proper space for dogs as urbanisation has lost their natural habitat. Thereafter, creating huge gaushalas, at appropriate locations, which can accommodate thousands of such cattle. The authorities should have to develop more infrastructure out of the residential areas for the dairies so that the owners can keep their animals away from the public.
- Animal lovers can help by rounding up strays and keeping them in custody until good homes are found for them. Instead of purchasing a pet from a breeder or pet store, adoption of strays can save time and money. Adopting a stray not only save a pet but also provide it a home forever and it leads to reducing the number of homeless pets in our community.
- Respecting animal lovers' feelings, if stray dogs are not to be killed, then shelter home is a viable remedy. Let dog pounds be financed by collecting a nominal tax on luxury items and five-star hotel billings.
- The state authorities should wake up to the citizens' welfare and employ strong cattle catching squad to catch the stray cattle which cause nuisance and also pose threat to human life. Cowsheds, cattle sheds must be constructed within suitable areas to keep the stray cattle and sufficient staff should be employed to take care of these cattle.
- Garbage should be kept in bins and cleaned regularly. Stray dogs cannot survive on the streets without garbage.
- The dispensaries do not have sufficient stock of anti-rabies vaccine. These should be fully equipped with medicines and vaccines. The people bitten by dogs are more harassed as they do not get treatment immediately. The anti-rabies vaccine should be available free of cost at veterinary centres and government hospitals and round-the-clock to give immunity to victims of dog bites.
- Collective adoption model is successfully implemented in many countries, where communities and the government collectively care for and treat stray animals. The government tags community dogs, vaccinates them, and offers medical attention for any injuries. Then local people care for, feed, and play with the dogs in their neighborhood.
- A community based animal birth control program, locally based, including free medical care and inpatient facilities can result in a rabies free, healthy dog population where human and animal interests are equally taken into account. Community based dog care projects need to be established in every town, village and city.
- Every AH hospital needs to provide free medical care for the local street dogs at the in- and outpatient departments of their clinic/shelter. Veterinarians have to be trained to serve and respect the lives of all animals.
- Dogs continue to attack pedestrians and two-wheeler riders, besides make venturing in the dark or isolated areas a nightmare. Only solution to the burgeoning menace lies in culling the stray and unregistered dogs at regular intervals. Law does not allow the necessary killing of menacing dogs like other animals. Now bold action is warranted,
- Microchip the pets is another measure to reduce the number of strays. Many pets become strays because they get lost. Unfortunately, most of these pets are not reclaimed by their owners. Microchips can reunite lost pets with their owners

quickly, easily, and efficiently.

## 1.12 CONCLUSION

Man-animal conflict is on the rise. This conflict adversely impacts human welfare, health and safety and is ridden with huge economic and social costs. It also impacts negatively on human health and safety. Increasing number of stray animals day by day is a crucial issue for the State Government. A number of efforts have been initiated by the government authorities to resolve the issue but no proper solution has been drawn till date. The present study has made many suggestions in the light of research outcomes to tackle the issue. Many new ideas have been explored to solve the problem of stray animals as well as to the better management of these homeless creatures. Awareness campaigns by the government can help create this systemic change in the public's mindset. The solution lies in sound policies and management of strays along with public cooperation. Apart from stray cows and dogs, monkeys also need a mention too as they create nuisance in certain residential areas. People are really fed up of these nuisances and have always complained the municipality regarding it but till now municipality hasn't come up with any good solution. It's a hope that the municipal corporations of Punjab will take up some new and innovative measures and curb this problem of stray animals. The issue of stray dogs and cattle should be on the priority list and effective steps must be taken on the earliest.

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