

Knowledge and Attitude of Dog Owner's Towards The Dog Anti-Rabies Vaccination

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Abstract

Introduction	Rabies is a fatal viral zoonotic disease prevalent in Nepal. Dogs are the key reservoir for transmission of diseases among human being as well as animals causing great public health problem with economic loss and social problem. In order to control rabies vaccination programme had been conducted in 12 municipalities such as Kathmandu, Lalitpur, Bhaktapur, Madyapur-Thimi, Kirtipur, Banepa, Dhulikhel, Panauti, Pokhara, Lekhnath, Siddharthanagar and Butwal during the year 2000-2004, by National Zoonoses and Food Hygiene Research Centre (NZFHRC) with the support of Donative Unit for Rabies Vaccine to Nepal, Tokyo, Japan.
Objectives	To explore the knowledge and attitude of dog owner's towards the dog rabies vaccination and dog population control strategy.
Methods	The structured questionnaire was prepared, pre-tested and piloted among the small group of dog owner population in Kathmandu. After that the structured questionnaire was administered among those dog owners who were randomly selected for the survey. Total 20,241 dog owners came to the vaccination center in order to vaccinate their 25000 pet dogs and cats against the rabies in different 12 municipalities, of which 500 dog owners were selected for interview.
Results	A total of 25,000 dogs and cats were vaccinated. About 500 dog owners' were randomly selected for the survey study by questionnaire. Maximum 80 percent of the respondent knew that rabies was a fatal disease and stray dogs were the major source, 59 percent of the respondent thought that stray dogs must be exterminated, about 30 percent respondents were against the current municipality practices of dog control by poisoning. 16 percent of the respondent suggested that birth control and sterilization programme should be carried out for stray and community dog population control. About 59 percent female dog owners accepted to sterilize their dogs. About 80 percent dog owners hadn't vaccinated their dogs previously due to inaccessibility, economic problem, ignorance, misinterpretation about rabies vaccination. About 49 percent young age group had a positive attitude towards overall rabies control by vaccination and dog population control by sterilization methods.
Conclusion	During the survey, we found in remote area people are not aware about dog vaccination against rabies. Now it is urgently needed that to formulate a government national policy to have compulsory dogs and cats vaccination against rabies. This could be done by free of cost throughout the country in one run as a campaign. Dog sterilization facilities must be developed in all 58 municipalities by establishing animal welfare center.
Key words	Sterilization, Animal welfare, Fatal.

Introduction

There is an estimated dog population of 18,49,106 in Nepal. Dog population studies have established Human: Dog population ratio estimate at 10:1 in the villages and 12:1 in urban areas. Presently total dogs have been categorized into three groups in both urban and rural areas in Nepal viz. pet dogs, community dogs and street dogs¹.

Domestic dogs are the primary reservoir of rabies in Nepal. More than 90 percent of human rabies post-exposure treatments are due to contact with suspect domestic dogs^{2,3,4}. From 1995 to 1999, 80,563 people received post exposure treatment through the government health system^{2,3,4}. More than 100 cases of

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hydrophobia are reported in Nepal every year and 97.6 percent of those deaths had originated from dog bites.

Dog population control in Nepal is attempted primarily through strychnine poisoning campaigns run by local municipalities. Estimated number of stray dogs killed in Nepal each year by local government is about 20,000 per year^{1,2,3}. Mass killing of dogs has been both unpopular with the public and ineffective as a standalone means of controlling the main rabies reservoir⁵. It is well accepted by the general public for human reasons and due to the potential for accidental poisoning of non-target species, including children. Disposal of poisoned dogs is also unsanitary, and provides significant opportunities for secondary poisoning or disease transmission.

Methods

In order to control rabies in dogs, anti-rabies vaccination programme had been conducted in 12 municipalities i.e., Kathmandu, Lalitpur, Bhaktapur, Madyapur-Thimi, Kirtipur, Banepa, Dhulikhel, Panauti, Pokhara, Lekhnath, Butwal and Siddharthanagar during the year 2000-2004 by National Zoonoses and Food Hygiene Research Centre with the support of Donative Unit for Rabies Vaccine to Nepal, Tokyo, Japan. A total of 25000 dogs and cats were vaccinated. About 500 dog owners' were randomly selected for the survey study by questionnaire.

The present study was designed to explore the knowledge and attitude of dog owner's towards the dog anti-rabies vaccination and dog population control strategy. The structured questionnaire was prepared, pre-tested and piloted among the small group of dog owner population in Kathmandu. The restructured questionnaire was administered among those dog owners who were randomly selected for the survey. Knowledge and attitude towards dogs, awareness about rabies disease and other behavior of dogs were included.

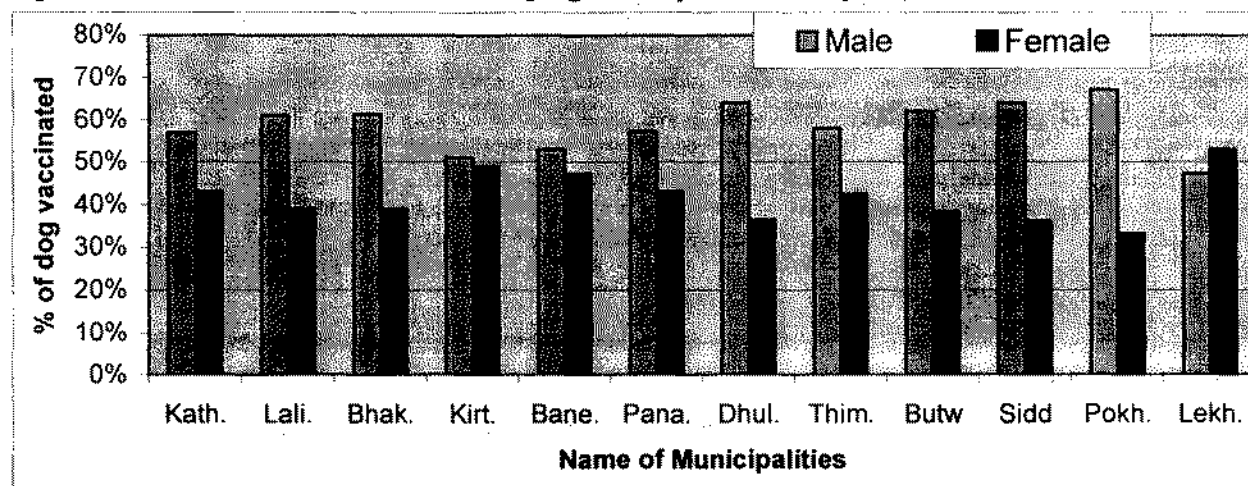
Results

Coverage are for free rabies vaccination

The free rabies vaccination campaign was conducted in the various areas in between 2000 to 2004. During this period total of 25000 dogs and cats were vaccinated by 20241 dog and cat owners. The total number of vaccinated males during the programme was found to be more than female. The highest percentage of males were vaccinated in Pokhara municipality i.e. 67 percent, followed by Siddharthanagar, Dhulikhel and Bhaktapur etc. The highest percentage of female were vaccinated in Lekhnatha i.e. 53 percent followed by Kirtipur, Banepa and Panauti.

It was found that in every municipality dog vaccinated number was good. (figure no.1)

Figure 1: Distribution of sex of vaccinated dogs against respective municipalities



Dog owners attitude in the survey and dog vaccination

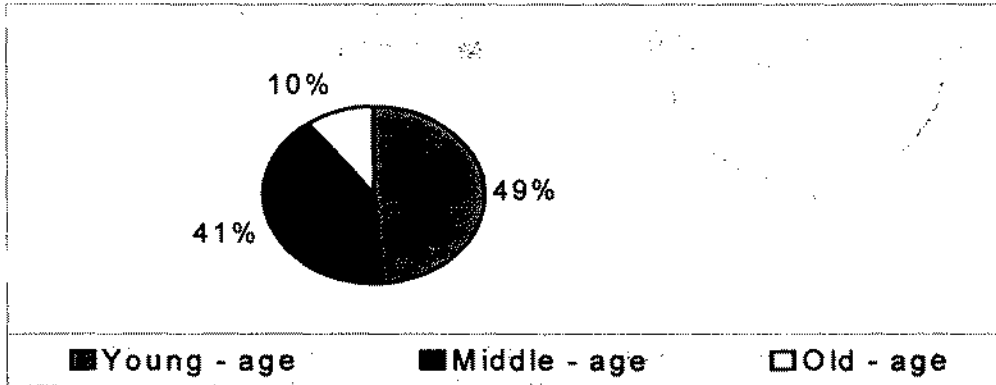
The involvement of male dog owners were found to be more encouraged with compare to female. Although there were positive attitude and had active participation

from the female owner's. Among 500 dog owners identified 67 percent were males and 33 percent were females. Larger group of population attitude was

positive for keeping dogs and cats for various purposes at home as pet during the study. Involvement of owners attitude in campaign to vaccinate their pet dogs has indicated basic viral zoonotic disease rabies. To know the status of awareness among the young population about the fatal generation, it was categorized into three broad group i.e. young aged people (up to 25 age group), middle aged people (up to 50) and old age group (above 50). The maximum 49 percent of owners

participated in the survey were young age group, which is followed by 41 percent, middle age group and least 10 percent, old age group people respectively. Maximum number of young age group people were found to be much more aware regarding dog vaccination and found much more curious regarding the dog population control strategy than middle and old age group people (figure no. 2).

Figure 2: Generation category of dog owners attitude participate in the survey and dog vaccination.

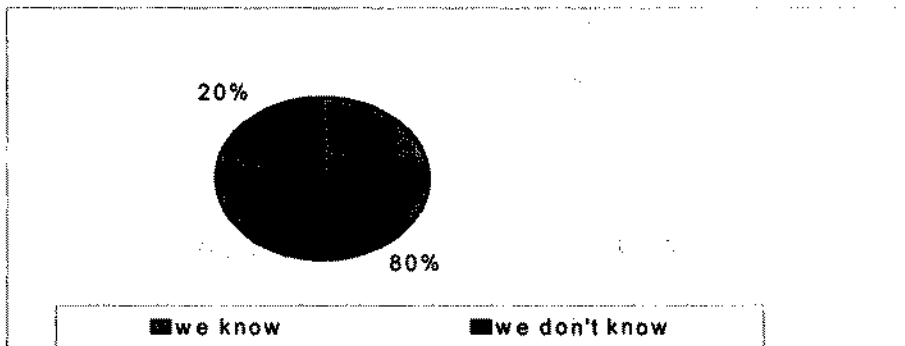


Dog owners knowledge about Rabies

The major part of this survey was to find out the knowledge of the dog owners with respect to vaccinate their pet dogs against rabies. In order to get that information dog owners were asked whether they have heard rabies or they know anything about the fatal

diseases that transmit from dogs to the human beings. About 80 percent of them knew about the rabies while 20 percent of them who were mostly uneducated and came from village didn't know about this fatal disease (figure no.3).

Figure 3: Dog owners knowledge about Rabies.



The booklets, pamphlets and other teaching materials were distributed during the vaccination to each and every dog owners. Most of the educated people found to be encouraging to their neighbors. Maximum respondents i.e. about 90 percent were willing to vaccinate their pet dogs freely and also thought that free rabies vaccination must be conducted not only in the certain places of the municipalities but throughout the country including villages. Since risk of getting rabies in the urban dogs is from the dogs of suburban or the

rural areas. The disease can kill people and animal both so most of the participants suggested that government should take immediate initiation to organize campaign in order to control the rabies in the county.

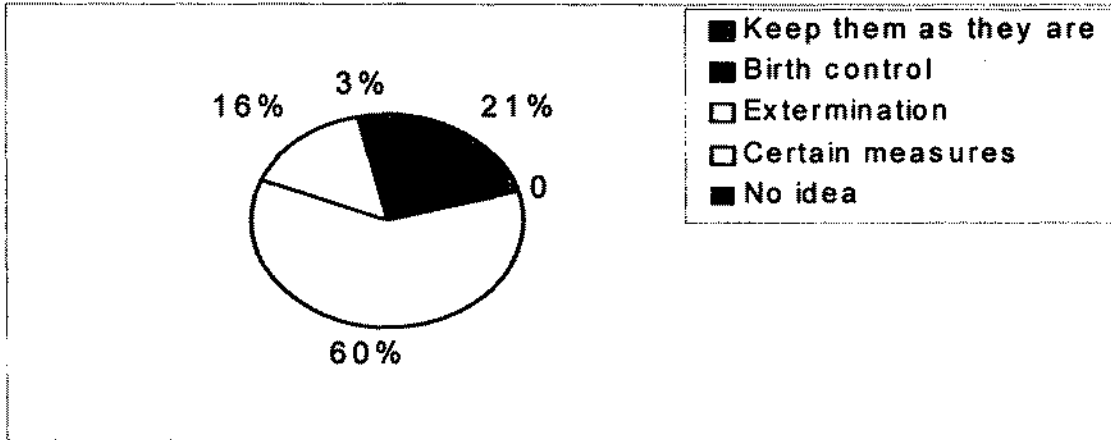
Dog sterilization

Population of dogs is increasing day by day throughout the country. The Concerned municipalities were found to be adopting killing process by poisoning the dogs in

most of the urban areas. Still the survey result revealed that 60 percent community people feels the stray dogs must be exterminate by any means. Most of them were found to be unaware about the municipality policy of

killing dogs. The awareness or knowledge about birth control among the surveyed population seemed to be lacking. Some of them have heard birth control for the first time during the survey (figure no. 4).

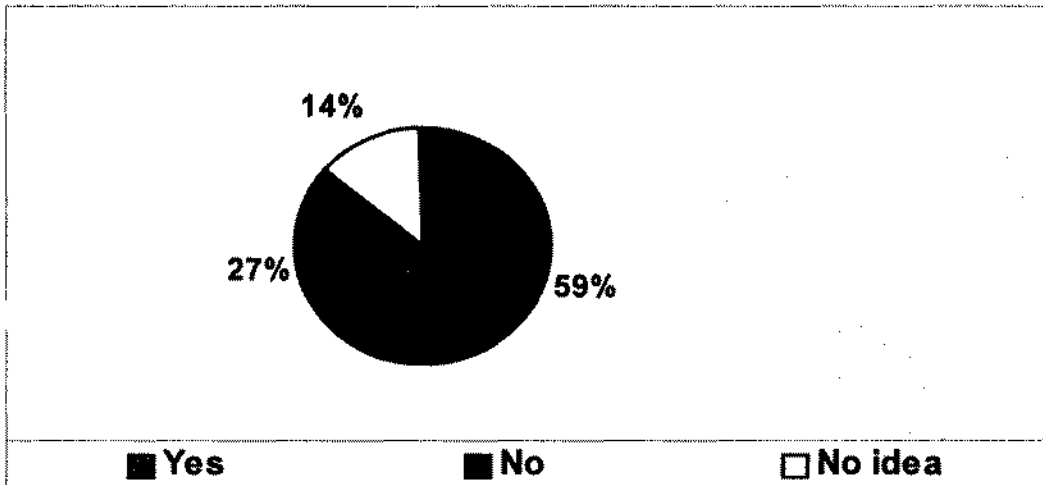
Figure 4: Dog Owners Opinion towards dog population control strategy.



The result has revealed that maximum 59 percent found to accept to sterilize their female dogs, 27 percent were

not interested to sterilization and rest 14 percent have no idea about sterilization. (figure no. 5).

Figure 5: Acceptance of female dog owners to sterilize their dogs

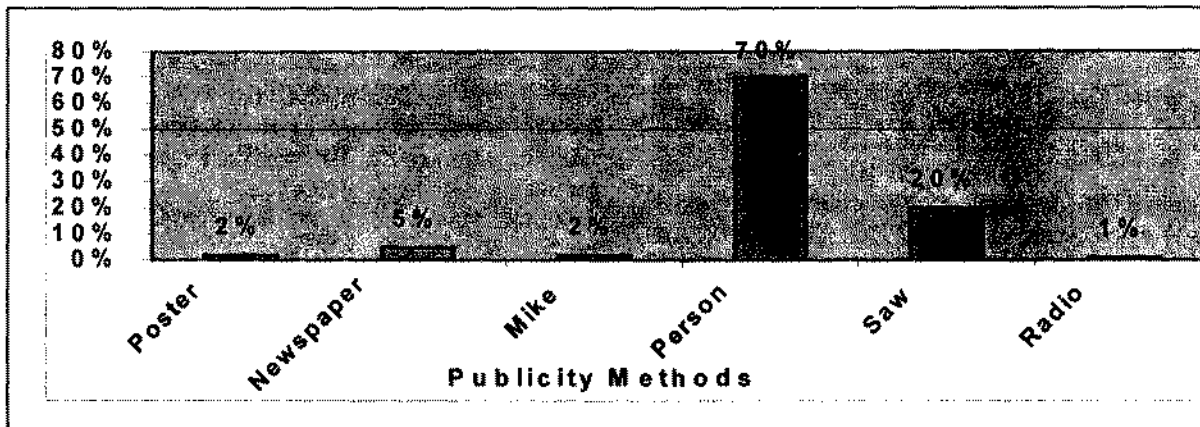


Use of Various Advertisement Methods during Vaccination Campaign

Pet dogs and cat vaccination service is available in most of the veterinary hospitals and kennel clubs including private vet. clinics. Although some of the dog owners were aware of the rabies, due to various reasons such as economic problem, distance between centers to that of their residence and others, they were announced through FM radio and miking was

done around the center just prior to the vaccination date. The impact was measured during the questionnaire survey and found that influence of those methods was seemed to be very less. Maximum people attended in the vaccination were due to person to person contact i.e. 70 percent followed by observing themselves the program. (figure no. 6)

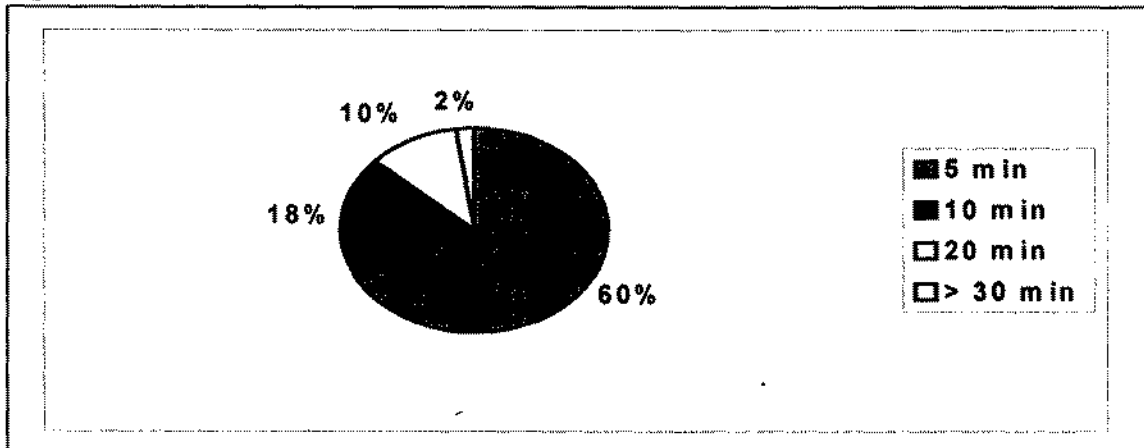
Figure 6: Influence of advertisement during campaign.



Distance plays the vital role in overall coverage of vaccination. In order to know the status of dog owners they were asked about time required to reach vaccination center. The result has revealed that maximum 60 percent people brought their dogs for

vaccination less than five minutes distance while 2 percent dog owners brought their dogs more than 30 minutes distance. The owners had demanded more vaccination centers. (figure no. 7)

Figure 7: Distance between vaccination center and residence.



Animal species vaccinated

During the vaccination period, total of 25000 dogs, cats, monkeys and guinea pigs were vaccinated in the twelve different municipalities of the country. Among them maximum 90 percent dogs followed by 14 percent cat, 3 each percent of monkey and guinea pig and 1 percent jackal were vaccinated.

Discussion

Maximum 80 percent of the respondent knew that rabies is a fatal disease and stray dogs are the major source, 59 percent of the respondent thought that stray dogs must be exterminated, about 30 percent

respondents were against the current municipality practices of dog control by poisoning. Sixteen percent of the respondent suggested that birth control and sterilization programme should be carried out for stray and community dog population control. About 59 percent female dog owners accepted to sterilize their dogs. About 80 percent dog owners hadn't vaccinated their dogs previously due to inaccessibility, economic problem, ignorance, misinterpretation about rabies vaccination. Dog sterilization facilities must be developed in all 58 municipalities by establishing animal welfare center.

Rabies is one of the main causes of death in the world. Each year 30,000 deaths were found to be recorded maximum of them were due to rabies in Africa, Asia and South America. Many developing countries including Nepal had large stray dogs population. A long-term National Control Program will require support and commitment from all levels of the health professions. In addition, training programs for community health care workers and professional continuing education should be improved. To strengthen human and animal rabies vaccine quality and availability, an economic feasibility study of the national capacity meet current and future vaccine demand should be necessary³.

In this present vaccination campaign, attitude and participation of male dog owners was found more than female dog owners. Most of the dog owners were young-age people (49%) and this generation people were more likely enthusiastic and had positive attitude towards controlling rabies. Most of the dog owners brought their dogs in the vaccination center because of person to person contact.

Only the educated and town area people knew that the rabies can kill people and it is transmitted from the cat, dog, and monkey. But still 20 percent of people were did not know about the rabies. Among them many people brought their dogs for the first time for vaccination.

Conclusion

The survey result has revealed that about 16 percent of the respondent suggested that birth control and sterilization programme should be carried out for stray and community dog population control. About 59 percent female dog owners accepted to sterilize their dogs. About 80 percent dog owners hadn't vaccinated their dogs previously due to inaccessibility, economic problem, ignorance, misinterpretation about rabies vaccination. Now it is urgently needed that to formulate a government national policy to have compulsory dogs and cats vaccination against rabies. This could be done

by free of cost throughout the country in one run as a campaign. Dog sterilization facilities must be developed in all 58 municipalities by establishing Animal Welfare Center.

The dog population control strategy applied in present condition throughout the world is application of sterilization. In most of the developed countries both male and female dogs are found to be sterilized. Sterilization of female is time consuming than males in case of dogs but is the only humane way of dog population control strategy. To find out the knowledge of dog owners about the dog sterilization and their attitude towards this strategy question was asked to the female dog owner participants.

Acknowledgements

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