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A descriptive study to assess the level of knowledge, attitude and practice regarding rabies and its control among dog owners in selected community area

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Abstract
Introduction: Rabies is a viral disease that causes inflammation of the brain in humans and other mammals. Rabies is caused by lyssaviruses, including the rabies virus and Australian bat lyssavirus. It is spread when an infected animal bites or scratches a human or other animal. Saliva from an infected animal can also transmit rabies if the saliva comes into contact with the eyes, mouth, or nose. Globally, dogs are the most common animal involved. In countries where dogs commonly have the disease, more than 99% of rabies cases are the direct result of dog. In fact, once someone with rabies starts experiencing symptoms, they usually do not survive. Rabies is almost always fatal if it is left untreated.
Aim: The aim of the study was to assess the knowledge, attitude and practice regarding rabies and its control among the dog owners in selected community area.
Method: A quantitative approach with descriptive research design was adopted for the present study. 100 dog owners was selected by using non – probability convenient sampling technique. A Semi-structured questionnaire was used to collect the demographic data and to assess the level of knowledge, attitude and practice among dog owners.
Result: The findings shows that among 100 study participants in that 56% had moderate knowledge, 7% had inadequate knowledge and 37% had adequate knowledge on rabies, 51% had moderately favourable attitude, 27% had unfavourable attitude and 22% had moderately favourable attitude on Rabies and 45% had moderate practice, 48% had adequate practice and 7% had inadequate practice on Rabies. The mean and standard deviation score of knowledge was 7.07±1.29, the mean and standard deviation score of attitude was 6.40±1.56 and the mean and standard deviation score of practice was 7.26±1.21. The calculated Karl Pearson's Correlation value of r = 0.065 between knowledge and attitude, r = 0.231 between knowledge and practice and r = 0.146 between attitude and practice shows a moderate positive correlation which was found to be statistically significant at $p<0.001$ level. The results are not shown statistically significant with level of knowledge, attitude and practice regarding rabies of its control among dog owners with their selected demographic variables.
Conclusion: Hence the study concludes that identified the existing level of knowledge, attitude and practice among dog owners. There was identified moderate level of knowledge and moderately level of favourable attitude and practices. This clearly infers that when knowledge on Rabies among Dog owners was increases and their attitude and practice level also increases.

Keywords: Rabies control, dog owners, knowledge, attitude, practice

Introduction

WHO leads the collective "United Against Rabies" to drive progress towards "Zero human deaths from dog-mediated rabies by 2030".

According to world organization for animal health travels, Rabies is a zoonotic viral disease caused by Lyssa virus rabbits can occur in all warm blooded animals including the humans [1]. Rabies is a fatal but preventable viral disease. It can spread to people and pets if they are bitten or scratched or scratches, usually via saliva by a rabid animal. The rabies virus infect the central nervous system. The virus can cause disease in the brain, ultimately resulting in death [2]. Once clinical symptoms appear, rabies is virtually 100% fatal. In up to 99% of cases, domestic dogs are responsible for rabies virus transmission to humans. Yet, rabies can affect both domestic and wild animals [3].

Poor public awareness towards rabies is considered as one of the bottle necks for the prevention and control of the disease in Ethiopia especially in canine rabies endemic cities like Addis Ababa. Understanding communities' perceptions of cause, mode of transmission, symptoms, treatment and possible intervention measures of rabies is an important step

towards developing strategies aimed at controlling the disease and determining the level of implementation of planned activities in the future [4]. Therefore, this study was designed to assess the level of knowledge, attitude and practices of selected communities area.

In public health knowledge, attitude and practice (KAP) studies have been widely used based on the principle that increasing knowledge will result in changing attitude and practice to minimize disease burden [5].

Rabies is a vaccine-preventable, zoonotic, viral disease. Every year, more than 15 million people worldwide receive a post-exposure vaccination to prevent the disease – this is estimated to prevent hundreds of thousands of rabies deaths annually. Still, rabies is the 10th biggest cause of death due to infectious diseases worldwide [6].

Rabies is well-known as one of the foremost vital public health issue that causes around 59,000 human deaths per annum worldwide [7, 8] Over 2,000 rabies-related human deaths have been estimated in the country, and children below 15-years ages are the most affected victims belonging to poor community practices [9].

Rabies treatment can be a vaccine-preventable disease, supplied that post-exposure prophylaxis (PEP) is given straight away and correctly. Protection against rabies correlates with the presence of rabies-specific virus-neutralizing antibodies (VNAs). According to the WHO, VNA titers larger than 0.5 international units per mL serum can reliably grant protection to human beings and animals. First dose given, Second dose given 7 days after first dose and Third dose given 21 days or 28 days after first dose.

As it is a public health issue, there is need to have adequate knowledge and safe practice towards rabies and preventing measures. This study will helps to assess the existing level of knowledge, attitude and practice regarding rabies and its control among the dog owners.

Methods and materials

The quantitative approach with descriptive research design was adopted for the study. After obtaining ethical clearance the formal permission was obtained from the Municipal Corporation. A total 100 dog owners who were in the selected urban area and the dog owners who met the inclusion criteria were selected as the study participants by using non probability convenient sampling technique. The inclusion criteria for the study participants who are having dogs, willing to participate in the study, participants able to read, write and understand Tamil and English. The exclusion criteria for the study participants were the people who don't have dogs, who are not able to read Tamil and English. The purpose of the study was explained by the investigator to each study participant and a written informed consent was obtained before collecting the data. The tool was consists two sections. Section- I: Demographic variable it consists of age in years, gender, social status, No of house hold members, no of children below 15 years, house hold history of dog bite, known someone with rabies dog ownership**.** Section-II: self structure question was used to assess the knowledge, attitude and practice regarding rabies among dog owners. Knowledge was assessed by the questionnaire, each correct answer weighing 1 point and 0 for the wrong answer. Attitude was assessed by using 2 point Likert scale. The responses were; agree and disagree. Agrees carries 2 points and disagree carries 1 point respectively for each statement. Practice was assessed by the yes or no type questionnaire. Each response had two possible values for 1 points Yes and 0 points for No. The collected data were tabulated and analysed by using descriptive and inferential statistics.

Results and discussion

Section-A: Demographic Characteristics

Among the 100 samples regarding to Age <40 years were with percentage (76%), >40 years were with percentage (24%) with regards to Male (85%), Female (25%) with regards to Social status of the household, Low (25%), High(75%) with regards to No of Children < 15 years in the household**,** 1-2 children (85%), more than 2 children(15%) and with regards to No. of household members, <5 members (86%), 5-20 members (14%) with regards to Household history of dog bite, History of dog bite (17%), No. history of dog bite (83%) with regards to known someone with rabies, I have seen a person with rabies (11%), I don't know anyone having rabies(89%) with regards to Dog ownership, Owned (33%), Not having ownership (67%)

Section B: Assessment on Level of Knowledge, Attitude and Practice Regarding Rabies and Its Control among Dog Owners.

The findings shows that among 100 study participants in that 56% had moderate knowledge, 7% had inadequate knowledge and 37% had adequate knowledge on rabies and its control among the dog owners. (Table-1)

The findings shows that among 100 study participants in that 51% had moderately favourable attitude, 27% had unfavourable attitude and 22% had favourable attitude on Rabies and its control among the dog owners. (Figure -1)

The findings shows that among 100 study participants in that 45% had moderate practice, 48% had adequate practice and 7% had inadequate practice on Rabies and its control among dog owners. (Figure -2)

Table 1: Frequency and percentage distribution of level of knowledge on Rabies and its control among Dog N = 100

Level of Knowledge	Frequency	Percentage
Inadequate Knowledge (≤50%)	7	7%
Moderate Knowledge (51 – 75%)	56	56%
Adequate Knowledge (<75%)	37	37%

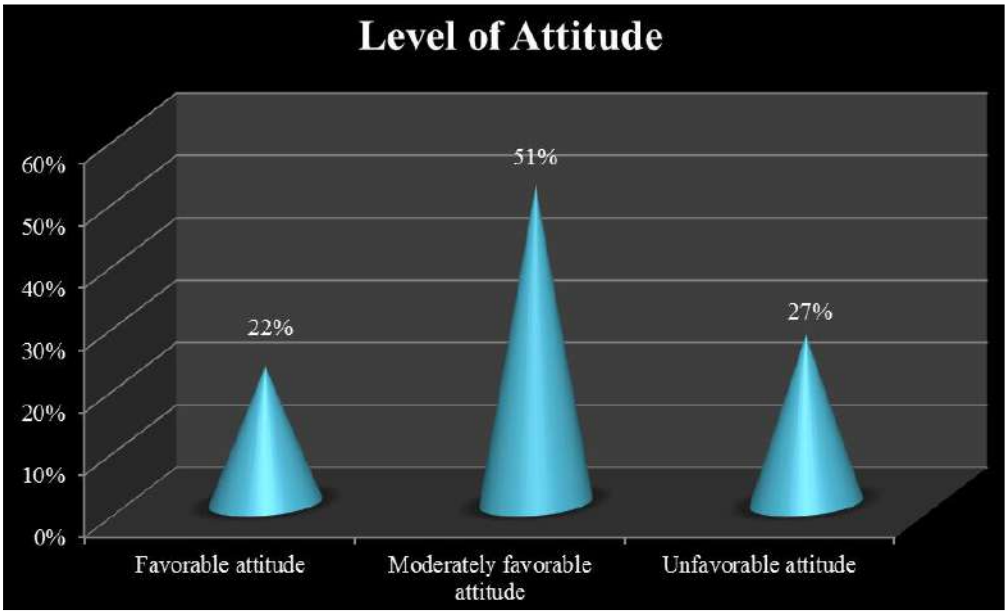

Fig 1: Percentage distribution of level of attitude on Rabies among Dog Owners.

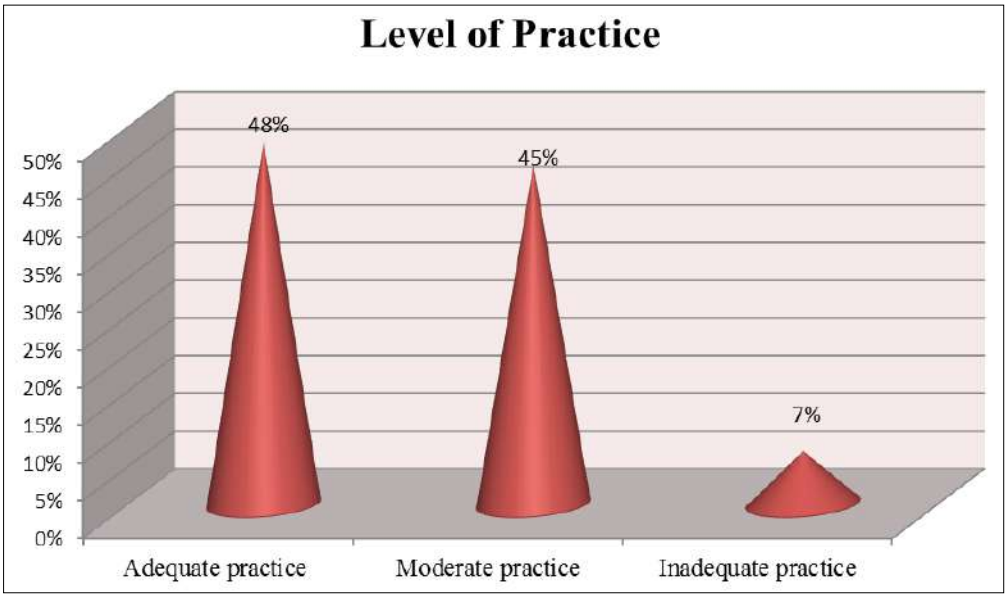

Fig 2: Percentage distribution of level of practice on rabies among Dog owners.

The study was supported by P Ntampaka (2019) conducted a study on Knowledge, attitudes and practices regarding rabies and its control among dog owners in Kigali city, Rwanda. Overall, 53% of the dog owners had sufficient knowledge of rabies, whilst 66% and 17% adopted adequate practices and positive attitudes towards rabies, respectively. This study showed that majority of the dog owners had sufficient knowledge and adopted appropriate practices of rabies [15].

Section C: Relationship between Knowledge, Attitude and Practice on Rabies and Its Control among Dog Owners.

The mean score of knowledge was 7.07±1.29, the mean score of attitude was 6.40±1.56 and the mean score of practice was 7.26±1.21. The calculated Karl Pearson's Correlation value of r = 0.065 between knowledge and attitude, r = 0.231 between knowledge and practice and r = 0.146 between attitude and practice shows a moderate positive correlation which was found to be statistically significant at p<0.001 level. This clearly infers that when knowledge on Rabies increases among Dog owners increases their attitude and practice level also increases. (Table-2)

Table 2: Correlation between knowledge, attitude and practice on Rabies among Dog Owners. N = 100

Variables	Mean	S.D	Karl Pearson's Correlation Value
Knowledge	7.07	1.29	r = 0.065
Attitude	6.40	1.56	p = 0.0001, S***
Knowledge	7.07	1.29	r = 0.231
Practice	7.26	1.21	p = 0.0001, S***
Attitude	6.40	1.56	r = 0.146
Practice	7.26	1.21	p = 0.0001, S***

***p<0.001, S – Significant

The study was supported by Chinnaian Sivagurunathan *et al.*, (2021) conducted a study on knowledge, attitude and practice study on animal bite, rabies and its prevention in an urban community. In this study, the correlation was carried

for the score of knowledge with attitude and practice. There is strong positive correlation between knowledge and attitude (r-0.7, P < 0.0001), knowledge and practice (r- 0.5, P < 0.001) and attitude and practice (r-0.5, P < 0.0001) [17].

Section D: Association between Knowledge, Attitude and Practice on Rabies and Its Control among Dog Owners.

The results are not shown statistically significant with level of knowledge, attitude and practice regarding rabies of its control among dog owners with their selected demographic variables.

The study was supported by Mahendra Pal *et al*., (2012) conducted a study on assessment of knowledge, attitude and practice (KAP) of canine rabies among inhabitants of Addis Ababa, Ethiopia. A total of 315 study subjects were interviewed. Out of which, 73.3% were male and the rest are female dog owners. Majorities of the household (91%) have the knowledge of rabies and only 26.9% dog owner's exercise regular dog vaccination. There is no significant difference of knowledge of rabies by sex, age and education (p> 0.05) [16].

Conclusion

The findings of the present study revealed that, the existing level of Knowledge, attitude and practice among dog owners was moderate and there is a need to improve their knowledge to know more about the rabies and preventive measures by conducting health programmes and by creating mass awareness.

Acknowledgement

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Conflict of interest

Authors declare no conflict of interest.

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