

KNOWLEDGE LEVEL OF DOG OWNERS ON ZONOTIC RABIES DISEASE

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ABSTRACT

The study was conducted to comprehend the zoonotic importance of rabies with special reference to the knowledge level of dog owners in urban areas of Gujarat. The study was carried out in randomly selected 120 dog owners of 3 urban cities (viz., Ahmedabad, Anand and Vadodara) of Gujarat state, India. Dog owners were subjected to a detailed interview regarding the zoonotic importance of rabies in dogs. Ex-post-facto research design was selected because of the independent variables of the selected respondent population for the study. The majority of dog owners had knowledge (94.16 %) that rabies to animals can be caused by bite of rabid dog and known about the symptoms of rabies (77.50%) like profuse salivation, depression and convulsions. Age, education, experience in dog keeping and social participation of dog owners had non-significant relationship with their level of knowledge of zoonotic diseases. Extension contact, mass media exposure and management orientation had positive and significant relationship with their knowledge of zoonotic diseases.

Keywords : dog owners, knowledge level, rabies

INTRODUCTION

Zoonotic Diseases (also known as zoonoses) are caused by infections that are shared between animals and people. People frequently get exposed to the bacteria, fungi, viruses, and parasites of animal species dwelling around human population that cause zoonoses in a number of ways. Hence, it becomes important for people working with or handling animal to know about potential zoonotic disease transmission and preventive measures against them. Little consideration has been given to the known and potential zoonotic infectious diseases of small companion animals. Dogs closely share the domestic environment with human and act as reservoir or source of many zoonotic diseases. Studies on the importance of zoonotic infections with special reference to the knowledge level of dog owners in urban areas are lacking in Gujarat. The present study was undertaken to understand Knowledge level of dog owners on zoonotic rabies disease in Ahmedabad, Anand and Vadodara districts of Gujarat state.

OBJECTIVE

To know the knowledge level of dog owners on zoonotic rabies disease

METHODOLOGY

Giving due considerations to the numbers and an appropriate direct approach to interview dog owners, the present investigation was carried out in Ahmadabad (Geographic coordinates: 23.03°N 72.58°E), Anand (22.556°N 72.951°E) and Vadodara district (22.18°N 73.12°E) of Gujarat state (India) under the jurisdiction of the Anand Agricultural University, Anand. For a selection of the respondent, a list of the dog owners was obtained from Government Veterinary Polyclinics of three urban areas where respondent visited or came for treatment of their dogs during last 3 years. Based on information from available resources, 40 dog owners were randomly selected from each town. Thus, a total of 120 dog owners were selected as respondents for the study and were subjected to an interview concerned with the knowledge level of dog owners to prevent zoonotic rabies. Ex-post-facto research design was selected because of the independent variables of the selected respondent population for the study. The crucial method used in collecting data was a field survey. The interview schedule was used as a tool for collection of requisite information in terms of percentage analysis. To know the relationship null hypothesis (Ho1) was also formulated.

Ho₁: There is no relationship between profile of dog owners and their level of knowledge of zoonotic diseases.

The data obtained were subjected to statistical analysis as described by Snedecor and Cochran which included calculation and interpretation based on standard deviation and correlation coefficient ('r') value. Variables with p<0.05 were considered as statistically "significant", variables with p<0.01 were considered as statistically "highly significant" while variables with p>0.05 were considered as statistically "non-significant".

RESULTS AND DISCUSSION

Rabies in an acute infectious disease of the central

nervous system having worldwide distribution. All warm blooded animals including human are suspected. The disease was first recognized in dogs in Hongkong in 1857. Rabies virus belongs to genus "Lyssavirus" in the family Rhabdoviridae. Dog remains the major host of the rabies virus among animal. The clinical development of the dog disease takes two general forms (i) Furious or aggressive mad dog form and (ii) Dumb or paralytic form. Rabies virus enters the body or when the virus laden saliva comes in contact with abraded skin or mucous membrane. The data about distribution of the dog owners according to their knowledge about rabies described in Table 1.

Table 1: Distribution of the dog owners according to their knowledge about rabies

n=120

Sr. No.	Rabies	Number	Percent
1	Rabies to animals can be caused by bite of rabid dog	113	94.16
2	Rabies in dog causes profuse salivation, depression and convulsions	93	77.50
3	Rabies to dog owners can be caused by contact of bruised or injured body part with saliva of rabid dogs	91	75.83
4	Rabies in man causes salivation, excitement, dysphagia, hydrophobia and convulsions	89	74.16

It is clear from the data presented in Table 1 that overwhelming majority (94.16 per cent) of dog owners had knowledge that rabies to animals can be caused by bite of rabid dog. Similar result with more than two-third (70.00 per cent) of the farmers practicing dairy farming had knowledge that bite of animals is transmission route for zoonotic diseases (Thakkar 2013). The majority (77.50 per cent) of them were

known about the symptoms of rabies like profuse salivation, depression and convulsions, more than three-fourth (75.83 per cent) had realized that rabies to dog owners can be caused by contact of bruised or injured body part with saliva of rabid dogs, and great majority (74.16 per cent) of dog owners had knowledge regarding the symptoms of rabies in human.

Table.2 : Profile of the dog owners

n=120

Sr. No.	Type of variable	Number	Percent
A	Age group		
1	Young aged group (up to 30 years)	45	37.50
2	Middle aged group (31 to 50 years)	63	52.50
3	Old aged group (Above 50 years)	12	10.00
B	Educational level		
1	Illiterate	01	00.85
2	Primary level (Up to 7 th standard)	10	08.33
3	Secondary level (8 th to 10 th standard)	18	15.00
4	Higher secondary level (11 th & 12 th standard)	26	21.66
5	Graduate level	45	37.50
6	Post graduate level	20	16.66
C	Experience in dog keeping		
1	Very low (Up to 5 years)	37	30.83
2	Low (6 to 10 years)	55	45.83
3	Medium (11 to 15 years)	15	12.50
4	High (16 to 20 years)	08	06.67
5	Very high (Above 20 years)	05	04.17

D	Social participation		
1	No participation	10	08.33
2	Low (membership in one organization)	45	37.50
3	Medium (membership in two organization)	55	45.84
4	High (membership in three or more organizations)	10	08.33
E	Extension contact		
1	Very low (up to 7 score)	48	39.87
2	Low (8 to 14 score)	34	28.50
3	Medium (15 to 21 score)	10	08.30
4	High (22 to 28 score)	22	18.35
5	Very high (29 to 35 score)	06	04.98
F	Mass media exposure		
1	Very low (up to 4 score)	25	20.83
2	Low (5 and 8 score)	40	33.33
3	Medium (9 and 12 score)	30	25.00
4	High (13 and 16 score)	15	12.50
5	Very high (above 16 score)	10	08.34
G	Management orientation		
1	Very Low (up to 13 score)	00	0.00
2	Low (14 to 26 score)	10	08.33
3	Medium (27 to 39 score)	25	20.83
4	High (40 to 52 score)	65	54.16
5	Very High (53 to 65score)	20	16.66

Relationship between profile of the dog owners and their level of knowledge about zoonotic diseases

(1) Age and knowledge

The data presented in Table 3 clearly indicate that age of dog owners had positive and non-significant relationship ($r=0.167NS$) with their level of knowledge of zoonotic diseases. The result indicates that level of knowledge about zoonotic diseases was found homogeneous amongst the different age group of the dog owners. Thus, null hypothesis (H_{01}) in case of age was accepted and concluded that age of dog owners had not played significant role in determination of their knowledge of zoonotic diseases. The finding is in conformity with the

findings reported by Bhagat (2005) and Thakkar (2013).

(2) Education and knowledge

The data presented in Table 3 clearly indicate that level of education of dog owners had negative and non-significant relationship ($r=-0.120NS$) with their knowledge of zoonotic diseases. The result signifies that level of education did not play any role in increasing or decreasing knowledge of the owners. It means that level of knowledge about zoonotic diseases was found identical amongst the dog owners with their respective level of education. Thus, null hypothesis (H_{01}) in case of education was accepted and concluded that level of education of dog owners was the trivial factor for their knowledge of zoonotic diseases. The finding is in conformity with the findings reported by Gohil (2005) and Thakkar (2013).

Table.3 : Relationship between profile of the dog owners and their level of knowledge about zoonotic diseases n=120

Sr. No.	Profile of dog owners	Correlation coefficient (‘ r ‘ value)
X1	Age	0.167 NS
X2	Education	-0.120 NS
X3	Experience in dog keeping	-0.069 NS
X4	Social participation	-0.128 NS
X5	Extension contact	0.522**
X6	Mass media exposure	0.205*
X7	Management orientation	0.264**

NS = Non-significant * = significant at 0.05 level ** = significant at 0.01 level

(3) Experience in dog keeping and knowledge

The data presented in Table 3 clearly indicate that experience in dog keeping of owners had negative and non-significant relationship ($r = -0.069$ NS) with their level of knowledge of zoonotic diseases. The result showed that level of knowledge about zoonotic diseases was observed similar amongst all groups in relation to varied experience level. Thus, null hypothesis (H_{01}) was accepted in case of experience in dog keeping and thus, it was concluded that there was non-significant influence of experience of dog owners in establishment of knowledge about zoonotic diseases. The findings were not in conformity with the findings reported by Durgga (2009) and Thakkar (2013)

(4) Social participation and knowledge

The data presented in Table 3 clearly show that social participation of dog owners had negative and non-significant ($r = -0.128$ NS) influenced on knowledge about zoonotic diseases. It shows that social participation was not trend setter in deciding the knowledge of the dog owners about zoonotic diseases. Thus, null hypothesis (H_{01}) was accepted in case of social participation and concluded that there was negative and non-significant relationship between social participation of dog owners and their knowledge about zoonotic diseases. The findings were not in conformity with the findings reported by Thakkar (2013).

(5) Extension contact and knowledge

The data presented in Table 3 clearly designate that extension contact of dog owners had positive and significant relationship ($r = 0.522$ ***) with their knowledge about zoonotic diseases which implies that extension contact of dog owners play vital role in determining their knowledge about zoonotic diseases. The knowledge about zoonotic diseases was observed higher among those dog keeper having higher level of extension contact and vice-versa. Thus, null hypothesis (H_{01}) was rejected in case of extension contact and concluded that there was positive and significant relationship between extension contact of dog owners and their knowledge about zoonotic diseases. The finding is not in conformity with the finding observed by Thakkar (2013).

(6) Mass media exposure and knowledge

The data presented in Table 3 clearly reveal that mass media exposure of dog owners had positive and significant relationship ($r = 0.205$ *) with their knowledge of zoonotic diseases. The result reflects that mass media played

an important role in improving knowledge of the dog owners regarding zoonotic diseases. More coverage related to the special zoonotic diseases related programmes in different media, tendency of the owners to use mass media more for entertainment and also because of the college level education played role for using of the mass media in urban areas. Thus, null hypothesis (H_{01}) was rejected in case of mass media exposure and concluded that there was significant influence of mass media exposure of dog owners in shaping knowledge about zoonotic diseases. The findings were not in conformity with the findings reported by Thakkar (2013).

(7) Management orientation and knowledge

The data presented in Table 3 clearly indicated that management orientation of dog owners had positive and significant relationship ($r = 0.264$ **) with their knowledge about zoonotic diseases. The result indicates that the knowledge about zoonotic diseases was observed better amongst those dog owners who had high degree of management orientation as compared to those who had low degree of management orientation. The results indicate that owners with better ability to plan the activity to get best from the available resources leads to have better knowledge about zoonotic diseases. It is natural that person with good management ability will always try to collect useful information and convert them in to knowledge as a useful input. Thus, null hypothesis (H_{01}) was rejected in case of management orientation and concluded that there was positive and significant influence of management orientation of dog owners on their knowledge about zoonotic diseases. The finding is in conformity with the findings reported by Thakkar (2013) and Vahora *et al.*, 2015.

CONCLUSION

It is revealed that vast majority of the dog owners had knowledge about rabies. The prophylactic immunization of dogs in one of the most important method for rabies control. This will help reduce need of post expose vaccination of humans to a great extent.

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