Title: RABIES EDUCATION ACTIVITIES FOR A ONE HEALTH APPROACH IN A RURAL POPULATION OF KARNATAKA

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Keywords

Abstract

To assess the rabies education activities implemented for its prevention; to assess the knowledge, attitude and practice of people regarding prevention of human rabies and control of animal rabies following rabies education activities as a part of “one health approach”

Original Article

RABIES EDUCATION ACTIVITIES FOR A ONE HEALTH APPROACH IN A RURAL POPULATION OF KARNATAKA

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ABSTRACT

Objectives : To assess the rabies education activities implemented for its prevention; to assess the knowledge, attitude and practice of people regarding prevention of human rabies and control of animal rabies following rabies education activities as a part of "one health approach".

Materials and methods: A series of rabies education activities were implemented in 3 "intervention"villages and no such education activities were implemented in another 3 adjacent villages considered as "controls" . By probability proportion to sample size (PPSS) technique, 20% of households were selected for knowledge ,attitude and practice survey i.e., 408 and 240 respectively.

Results: Rabies education activities implemented was mainly responsible for significant improvement in the knowledge, attitude and practice of respondents regarding prevention of human rabies and control of animal rabies in the"intervention"villages.It was observed that the rabies video in regional language was the most common source of information on rabies prevention. The second major source was the rabies volunteers, followed by the annual indoor wall calendar with rabies messages distributed to the all the households.

Conclusion . There was significant improvement in the K A Pamong the people in the "intervention"villages about rabies prevention and this was mainly due to various rabies education activities implemented as a one health approach.

Introduction:

Rabies is a fatal but preventable disease. Awareness in the community about rabies prevention will go a long way in alleviation of the problem. Most of the studies available are focused on one time survey of knowledge, attitude and practice (KAP) about rabies. There are very few studies having interventions and follow up in the rural communities. Also the different rabies education strategies that are available have never been assessed and measured.

Adopt a village

A Rural Rabies Prevention Project, is a community based project on the concept of "one health "for the prevention and control of rabies.[1] One of the important activity of the project was the surveys on KAP of subjects on rabies prevention and campaigns of rabies education activities for its prevention. In this background, the present study was taken up with the following objectives i) To assess the rabies education activities implemented for its prevention. ii) to assess the KAP of people regarding prevention of human rabies and control of animal rabies after the implementation of rabies education activities in the rural population.

Materials and methods

A series of rabies education activities were implemented in 3 villages for a duration of one year in 2010 which were considered as the "intervention villages" and another nearby 3 "control" villages where no such rabies education activities were implemented during the same period [1]Based on the results of the baseline KAP survey and after consultations with

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Table - I
Rabies Health Education Activities in the three "intervention" villages

Rabies Education Materials	Number
Annual indoor wall calendar with rabies prevention messages (in Kannada) distributed to households	2000
Book labels on rabies prevention distributed among school children	1000
Posters fixed on the indoor walls-on rabies PEP and responsible dog ownership (community centers,schools, health centres, private medical practitioners, etc.)	65
Snake and ladder game charts - on rabies prevention for school children	16
Rabies training aid (for rabies volunteers)	15
Outdoor wall paintings having rabies education messages at select places in the villages	11
Rabies DVD	1
Rabies education activities	
Rabies DVD shown in local language (kannada)	102
? No of times shown in schools	6
? Local cable television network	96
Veterinarians and other health staff trained in rabies prophylaxis	40
Rabies volunteers who attended training programme	24
Rabies education sessions conducted in the village per month	14
Rabies education sessions conducted in schools per month	5
? School children who attended rabies education sessions	370
Drawing competitions held for school children on rabies.	6
Public rallies (Banners, Posters and pamphlets on rabies prevention provided/ distributed)	2
Dog welfare awareness programme	2
Folk dance with messages on rabies and its prevention	1

experts in rabies and IEC (information, education and communication) department of the state government, the following rabies education materials were developed and various activities implemented in the "Intervention" villages (Table-1). To educate villagers on rabies prevention, separate cadres of women volunteers were chosen. These women popularly known as "rabies volunteers"were provided with teaching aid chart on rabies prevention in local language (Kannada) for educating the villagers. The medical personnel from primary health centers, veterinary personnel from veterinary dispensary/hospital, school teachers, anganwadi teachers & members of self-help group in the villages were also educated about rabies prophylaxis and animal welfare activity. (Table-1)

The sample population was selected by probability proportion to sample size (PPSS) technique, 20% of households were selected for KAP survey i.e., 408 and 240 respectively. Systematic random sampling technique was followed for selection of households in the villages. Every 5th house was the sampling unit. [1]An assessment was made on the existing KAP of the population on rabies prevention by base line survey in the six villages. An end line KAP survey was again conducted one year after implementation of rabies education activities among the same respondents who were was interviewed in the base line KAP survey. [1]

Results

I. Rabies education activities : Out of all the rabies education activities implemented in the interventional villages, it was observed that the most common source of information about rabies prevention of the people, was the "rabies video" in regional language telecast by the local cable network every week on a specified day / time for a period of 12 months in the intervention villages. The second major source was the rabies volunteers, followed by the annual indoor wall calendar with rabies messages distributed to the all the households. The other sources of information about rabies were outdoor wall paintings with rabies messages at strategic places in the community , wall posters on rabies and dog ownership, public awareness rally and folk media (Table -II).

Table : II
Distribution of people according to the source of Information on rabies prevention based on endline survey in "intervention villages"(n=408)

Sl. No	Source of information regarding rabies	Responders
1	Rabies video in local cable network	198 (48.5)
2	Rabies volunteers	84 (20.6)
3	Annual indoor wall calendars with rabies messages	82 (20.1)
4	Wall posters on rabies post exposure prophylaxis	32 (7.8)
5	Wall posters on responsible dog ownership	22 (5.4)
6	Wall paintings with rabies awareness info	20 (4.9)
7	Public awareness during World Rabies Day	10 (2.4)
8	Folk media	05 (1.2)

Note : There was no intervention in the three control villages

Similarly, it was observed that the medical doctor was the main source of information among the health care providers about rabies prevention. The other sources of information were friends, family members and schools.

ii. KAP on human and animal rabies : Rabies education activities implemented in "intervention" villages were mainly responsible for significant improvement in the KAP of people regarding human and animal rabies prevention as shown in the end line survey in the "intervention" villages as compared to the control villages (Table-III).

iii. Human rabies: From table –III, comparing the mean rank score of knowledge between "intervention villages (41.12)" and "control villages(17.52)", it was found to be highly significant (Z=5.218, P=0.001) in the "intervention" villages. Similarly, highly statistically significant mean rank score of "attitude and practice" in"intervention" village as compared to the "control" villages was observed.

iv. Animal rabies : From table –III, comparing the mean rank scores of "knowledge" between "intervention" villages (99.13) and control villages (34.39), it was found to be highly statistically significant (Z=58.50, P=0.001) in the "intervention" villages. Similarly, highly statistically significant results mean rank scores of "attitude and practice" in "intervention" villages as compared to the "control" villages was observed.

Discussion:

There was a significant improvement in the KAP of the people on prevention of human and control of animal rabies after the implementation of the different rabies education activities in the 3 "intervention" villages. Based on the information/knowledge gap identified in the baseline survey appropriate rabies education materials were indigenously developed. Each of the education materials developed for spreading the awareness on rabies prevention had their own advantages and disadvantages. The tools like snake and ladder game chart, drawing competitions in the schools were effective in children and materials like showing video film on rabies during the weekends through local cable networks was very effective in the adults. Similarly, a separate cadre of workers known as "rabies volunteers" was equally effective in the dissemination of information using rabies training aid through one to one contact. On the other hand utilization of the traditional folk dance (Kamsalekunitha) and organization of public rallies was useful in creating awareness about rabies prevention for community at large. In this manner a series of rabies education activities implemented and sustained throughout the year between baseline and end line survey was mainly responsible for the significant improvement in KAP of people on rabies prevention. This project was novel and

Table - III
Comparison of Knowledge, Attitude and Practice of subjects in "intervention"and control villages in end line survey

Human Rabies	Intervention Villages			Control Villages			Z-Value*	P-Value
	Mean	SD	Mean Rank	Mean	SD	Mean Rank		
Knowledge	22.94	5.27	41.12	14.48	4.24	17.52	5.218	0.001
Attitude	18.61	2.12	41.50	14.37	2.27	17.06	5.426	0.001
Practice	7.91	0.88	42.86	4.70	1.54	15.39	6.141	0.001
Animal rabies								
Knowledge	15.93	2.39	99.13	9.39	1.85	34.39	58.500	0.001
Attitude	8.58	1.54	95.57	5.58	1.25	37.99	296.500	0.001
Practice	6.94	1.70	91.01	4.73	0.97	42.63	602.500	0.001

Note : SD: Standard deviation, Z value obtained through Mann-Whitney test

unique in the country and a pioneer effort to test the results of a "One Health" approach for prevention of rabies in humans and control of rabies in dogs.

Health education of the community with culturally appropriate information, education and communication (IEC) material is a necessary strategy to reduce delay in seeking appropriate treatment.[2] There is definitely a gap in people's knowledge, attitude, and practices about dog bite and its management and there is need for taking urgent measures for the control of stray dog population at the block level.[3] The level of awareness about rabies and its control measures is not satisfactory. The attitudes and practices of the respondents reflect the lack of IEC activities, inaccessibility of treatment facilities and the lack of services that would enable community participation in rabies control.[4]

Conclusion and Recommendation

There was significant improvement in the KAP among the people in the "intervention" villages about rabies prevention and this was mainly due to various rabies education activities implemented based on rabies education materials developed indigenously after considering the key KAP gaps in the community. The rabies education materials and activities were appropriate and effective for a one health approach. This may be considered for replication in other parts of the country.

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ANNOUNCEMENT

The APCRI Newsletter is published every six monthly, in October and in April. APCRI members and the members of the Scientific Community are requested to contribute News Clippings, Photographs and Reports on Scientific activity on Rabies and Related matter for publication in the Newsletter.

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