

Knowledge, Attitude and Practice regarding Rabies in Rural area of Lahore.

Rashida Noureen

Lahore School of Nursing
The University of Lahore, Lahore Pakistan.
rashidanoureen144@gmail.com

Mohammad Afzal, Associate Professor

Lahore school of nursing
The University of Lahore, Lahore. Pakistan
Afzalaku@outlook.com

Iram Majeed

Lahore School of Nursing
The University of Lahore, Lahore Pakistan.
iramrajeed@gmail.com

Prof. Dr. Syed Amir Gilani

Allied Health sciences
The University of Lahore, Lahore. Pakistan

ABSTRACT

INTRODUCTION: Rabies is most common in the world where stray dogs are presented in large numbers, particularly in under developing countries. Rabies generally influences poor rural communities especially children are influenced in extensive number. Rabies is an endemic disease. Rabies is a deadly infection which is present in the salivation of infected animals. The rabies infection is typically transmitted through animal bite. Residential and wild animals both are responsible for rabies. Causative agent of rabies is negative standard RNA virus from Genus Lyssavirus.

METHODS: Descriptive study design was used in this study. The study was conducted in the rural area of Lahore. Data was collected from adult population age between 18-50yrs old. Data was collected through the administration of self-administered close ended questionnaire. The data were then analyzed by using SPSS statistical software version 24.

RESULTS: Total 150 responder interviewed, 117 (78%) of them were males and 32 (21%) females. 38% of the age of responders were between 15 to 29 years, (57)38.0% 30 to 45 years and (76)50.7% and above 45 years old were (17)11.3%. most of the responders showed that they had heard about rabies. 63.3% people had good level of knowledge on rabies. These findings indicate that the rural community has good knowledge about rabies but unfortunately they are unaware about rabies fatality. Although, most people have not good practices regarding post exposure of rabies.

CONCLUSIONS: This study show that the people of rural community have knowledge about animal bite.63.3% people already know about rabies but there are still gaps most of the people did not know that it is fatal disease.78% people are unaware about disease fatality.it was observed that people are unaware regarding post exposure prophylaxis. Community population did not concerning with cause and

modes of transmission.42.7%people have lack of knowledge about treatment and after appearance of sign and symptoms of disease. Attitude towards anti rabies are not good in the community 54.7% people was aware about vaccination but only 26% have vaccinated dog in their houses.38.7% people believed on herbal extract. Practices regarding post exposure are not good.

KEYWORDS: Rabies, Animal bites, rural area of Lahore.

I. INTRODUCTION

Human rabies is almost present in 150 countries and on all continents, except in Antarctica. It is estimated that human mortality rate due to rabies is highest in Asia. Rabies is neglected disease in Pakistan therefore high incidence rate of dog bite. Main source of rabies in Pakistan is domestic dogs and other domestic animals. There is no specific surveillance system in Pakistan (WHO Organization, 2013).

Rabies is most common in the world where stray dogs are presented in large numbers, especially in under developing countries. Rabies mostly affects poor rural communities especially children are affected in large number. Rabies is an endemic disease with high incidence rate.

(Digafe, Kifelew, & Mechesso, 2015).

Rabies is a fatal virus which is present in the saliva of infected animals. The rabies virus is usually transmitted through animal bite. Domestic and wild animals both are responsible for rabies. Wide range of infected animals can transmitted this disease. Causative agent of rabies is negative standard RNA virus from Genus Lyssavirus. (Tschopp, Bekele, & Aseffa, 2016).

Rabies is a lethal zoonotic focal sensory system disease that is transmitted by both wild and household animals.. Globally, it is evaluated that no less than 55,000 individuals died due rabies every year. This disorder influences all warm-blooded well evolved creatures including human and has been undermining the lives. (Abdela & Teshome, 2017).

Knowledge, attitudes and practices (KAP) studies have been widely used around the world for different applications in public health based on the principle that increasing knowledge will result in changing attitudes and practices to minimize disease burden (Sambo et al., 2014).

Community awareness regarding zoonotic disease is incredibly crucial in zoonotic diseases prevention and management. For expeditiously increasing awareness, the knowledge gap among the community ought to be known and targeted (Wasay et al., 2012).

Community awareness of all aspects of zoonotic disease is mostly lacking or restricted, like tending or management of animal bites, pre-exposure and post-exposure prevention, accountable pet dog ownership, dog population management. (Yalemebrat, Bekele, & Melaka, 2016)

Likewise immunizations Furthermore post purposes of presentation prophylaxis are both accessible clinched alongside Pakistan, the level of state funded mindfulness something like the preventable and treatable aspects of this disease What's more general population perception Furthermore attitudes towards inoculation What's more post-exposure prophylaxis would vital elements to arranging for powerful interventional methodologies.

(Tschopp et al., 2016).

According to study 55% of people did not know about the dog bite similarly as a predisposing variable for Rabies. The investigation highlighted generally poor population unaware of proper knowledge, extreme under-reporting from claiming mankind's rabies cases, absence of record keeping also poor coordinated effort between people in general Furthermore individual can play an important role in rabies control. (Kumarasamy et al., 2010)

.Poor management of dog bites cases is also cause of human fatality. , including poor techniques for wound cleaning and failure to gain health facilities. The limited source of availability of rabies immunoglobulin for treatment of high-risk rabid dog bites. (Wasay et al., 2012)

Non availability of vaccine is contributed toward high fatality rate. Awareness regarding dog bite and dog bite wound management of an individual can save lives, as well as ensuring the accessibility of anti-rabies vaccine and rabies immunoglobulin are significant in the prevention of human rabies. A worldwide vaccination campaign should be undertaken to get rid of canine rabies. (Susilawathi et al., 2012)

Practices toward rabies in the rural area are very feeble in both aspects pre-exposure and post exposure of rabies. Vaccination is prescribed for those individuals who are at high risk of exposure of rabies. Especially occupational groups include veterinarians, veterinary technicians, animal control officers, field researchers, wildlife workers, and animal disease laboratory workers. Vaccination is a prophylactic measure against rabies. Practices regarding treatment after dog bite to get medical facility immediately. But unfortunately in our country there are no

good practices to get medical facilities within time period. Wound cleaning is most important in decreasing the risk of rabies virus infection. After infected animal bite wound should wash with tap water and soap as soon as possible. Animal bite wounds should be immediately cleaned with soap and water. Primary physician should provide Wound care. (Rupprecht et al., 2010)

Attitudes toward infected animal bite in our rural areas are not worthy. People of rural area are not well aware about the death rate due to dog bite and as well as importance of vaccination in case of dog bite. In the rural areas unvaccinated dogs and cats exposed to a rabid animal should be euthanize immediately. But due to unawareness people are unwilling to keep their animal in isolation. In case of unvaccinated humans, rabies is always fatal after neurological symptoms have developed after dog bite (Mages, 2015)

AIMS OF THE STUDY

The aim of this the study was to assess the knowledge, attitude, and practice regarding rabies (animal bite) in the rural area (Husain Abad community) of Lahore.

.SIGNIFICANCE OF THE STUDY

The research is significant because it contributes in the knowledge development, and practical improvement. The research plays an important role in shaping the institution and for its development, and it is essential to have knowledge-driven growth for better learning.

These results may be used as a model by the city government or stakeholders to take appropriate actions to limit deaths due to rabies in rural areas of Lahore, which can promote healthy lifestyle. Study results will help to determine that either rabies is taken as positive or negative in a rural area of Husain Abad, Lahore.

Research Question – what is knowledge, attitude and practice regarding rabies in rural area of Hussain Abad Lahore?

II LITERATURE REVIEW

In the past some studies have tried to investigate that the awareness about the dog bite and its causing disease among public and health professionals, but due to insufficiency of data related to dog bite disease awareness still in problem.

WHO reported that worldwide 55,000 deaths per year due to animal bite recorded, Asia is contributing the largest part in the animal fatality .In Asia 56% of the total deaths due to animal bite. It is estimated that urban and rural dog bite ratio is 7.4 in urban and 14.3 in rural area. 5 billion individuals are at high risk of suffering from rabies in Asia. Worldwide deaths due to rabies are 213,000 in 2002, 198,000 of them were children under five years of age. Islamic Republic of Pakistan has one of the world's highest rates of Rabies, In Pakistan almost 2000-5000 human cases per year reported. (Wasay et al., 2012)

According to study almost 35% of people stated that they would expect hostile to rabies antibody at a doctor's facility, 14% detailed that they would expect different medications

(e.g. Anti-infection agents, lockjaw and torment help), while whatever is left of the respondents (51%) revealed that they would rely upon doctors' advice. Although the dominant part of respondents (63%) realized that rabies is lethal after the beginning of side effects, an expansive rate was uninformed of the deadly idea of the disease. While 70% realized that local pooches and people can experience the ill effects of rabies, no one but 7% could name at least three sorts of creatures fit for transmitting rabies. 81% percent realized that rabies was transmitted through chomps by presume crazy animals. 27% percent could portray rabies as a malady, 41% depicted it just as a difference in conduct in canines, and 32% were not able give any portrayal. (Sambo et al., 2014)

Almost citizen who live in the urban areas know about disease. They know as slightly different names like mad dog disease. On the other side the individual of community are familiar with the dog bite with many misconceptions of disease. Community people have many false believes regarding dog bite, its cause and transmission although bite is concerned with the means of transmission of the disease. Germ organism transmission due to saliva 84% direct or indirect (irrespective of skin condition). Mostly human concerned with traditional treatments which have serious negative consequences to their health. 34 %people believe that the rabies caused in the dog is due to starvation, thirst and longtime exposure to heat (Hossain et al., 2012).

In Bali, according to conducted study 104 cases of human rabies were registered. Almost all (92%) cases had a history of dog bite. Almost (56.7%) male belong to rural areas who have dog bite. After bite incident, only 5.8% male population had received wound treatment and anti-rabies vaccine. Dog bite to the onset of signs and symptoms the estimated time was 110 hours. The mean length of medical care until death was 21.8 hours. 50 % of patients had less than prodromal symptom. 37.6% of patients had most frequent prodromal symptom was painful at wound site. There was two most common systems which effected by dog bite. Signs of neurological system were (89.2%) agitation and confusion was (83.3%). Sign of dysfunction of autonomic nervous system dysfunction included hydrophobia (93.1%), hyper salivation (88.2%), and dyspnea (74.4%). On admission 21.6% showed paralytic reflection, while the rest (78.4%) showed furious rabies manifestations. (Susilawathi et al., 2012)

In Gondar Zaria district, Abyssinia, about 62.2% respondent of study had strong believed in herbal extracts or traditional medicines. A high rate of study participant (84%) also believe on traditional treatment in Gondar. In Bangladesh, 59% of insect bite victims received traditional therapist instead of visiting the hospitals. This is due to easy access, unawareness from medical treatment in under developing countries. They prefer home remedies. Immediate use of efficient anti -rabies vaccine with proper wound management is almost effective in preventing rabies (Yalemebrat et al., 2016).

III. METHODOLOGY

SETTING: The study was conducted in the rural area of Lahore ,Pakistan ..

RESEARCH DESIGN: Descriptive study design was used in this study. It gives an overview of what is knowledge, Attitude and practices of community population regarding fatal disease rabies.

POPULATION: All population who are resident of the rural area of Lahore. Adult population's age between 18-50 years was included in this study.

SAMPLING: The sampling was done using the convenient sampling technique.

RESEARCH INSTRUMENT: The data collection instruments used was questions adopted by (Yalemebrat,2016) which were interviewed by data collectors, which consisted of four parts demographic variables, knowledge, attitude and practices towards animal bite especially dog bite. Likert type approach was used to identify KAP.

DATA GATHERING PROCEDURE: The data was collected through house to house visit. Population educated about the purpose and procedure of the study and data was collected from only willing participants

DATA ANALYSIS: Data analysis was done by using SPSS version 21.

STUDY TIMELINE: The study was conducted from September 2017 to January 2018 in the rural area of Lahore

ETHICAL CONSIDERATION: Before the fieldwork ethical clearance was obtained from adult population of community. Response of population was anonymous and data collectors informed to the population that they had full right to discontinue or refuse to participation in the study. A letter of agreement was also attached with the questioner to obtain the permission of each respondent. Beside this the data collectors was trained on their responsibilities for describing the purpose of the study, giving orientation, telling importance of honest and sincere reply, on responding to the questions.

IV. RESULTS PROFILE OF THE RESPONDENTS

Respondents were adult aging between 18 to above 45 years of age residing in rural area of Lahore.

Table 1 Demographic Characteristics

S#	Demographic Characteristic	Frequency	Percentage
1	GENDER		
	Female	32	21.3%
	Male	117	78.0%
2	Qualification		
	Illiterate	15	10.0%
	Primary	60	40.0%
	matriculation	75	50.0%
3	Age Group		
	15-29 Year	57	38.0%
	30-45 Year	76	50.7%

Have you heard about rabies before	Yes	95	63.3
	No	35	23.3
	Not sure	20	13.3
Source of Information	Formal	37	24.7
	Informal	56	37.3
	Mixed	57	38.0
Is it easily treatable after occurrence of sign and symptom?	Yes	57	38.0
	No	29	19.3
	Not sure	64	42.7
Is it a fatal disease?	Yes	32	21.3
	No	53	35.3
	Not sure	65	43.3
What are the sign and symptoms of disease?	Left eating	16	10.7
	Change in behavior	65	43.3
	Both 1 and 2	68	45.3
Only dogs are source of rabies.	Yes	67	44.7
	No	37	24.7
	Not sure	46	30.7
Who are affected by rabies?	Human	102	68.0
	Cattle	31	20.7
	Wild animals	17	11.3
Is it transmit from animal to human being?	Yes	64	42.7
	No	37	24.7
	Not sure	49	32.7
4	Above 45 Year	17	11.3%
	Occupation		
	businessman	59	39.3%
	Farmer	33	22.0%
	Unemployed	58	38.7%

Profile of Respondents 78.0% (117) were male and 21.3% (32) were female participated in this study. Respondents were between the ages of 15-29 years 38.0% (57), 30-45 years 50.7% (76), and above 45 years 11.3% (17). Respondents education level was majority was matriculation 50.0% (75), Primary education was 40.0% (60) and only 10.0% (15) people was illiterate. 39.3% (59) people was businessman, 22.0% (33) was farmer and 38.7% (58) was jobless

respondent who was the part of this study conducted in community of Husain Abad Lahore

Table 2. Knowledge about Rabies

According to table no.2 it show that 63.3%(95) people have already heard about rabies, 23.3%(35) have not heard and 13.3%(20) not known about it. Source of information about rabies 24.7% (37) formal, 37.3% (56) informal and 38.0% (57) was mixed source of information. After appearance of sign and symptoms is it treatable 38.0% (57) people agree Yes, 19.3% (29) Not agree and 42.7% (64) not sure. About the question of is it fatal disease, 21.3% (32) agree with yes, 35.3% (53) disagree and 42.7% (64) was not sure about it. Sign and symptoms of the disease are 10.7% (16) said patient left eating, 43.3% (65) agree with change in behavior and 45.3% (68) agree with both 1 and 2. Only dogs are source of rabies 44.7% (67) was agree with yes 24.7% (37) was not agree and 30.7% (46) was not sure. Who are affected by rabies 68.0% (102) was human, 20.7% (31) cattle and 11.3% (17) wild animals. Is it transmit from animal to human being 42.7% (64) agree with yes, 24.7% (37) with No and 32.7% (49) was not sure. According to this table majority people had known about rabies but they still not know that it is fatal disease (21.3%)

Table 3. Attitude Regarding Rabies

		Frequency	percent
What is attitude of people toward vaccine?	Positive	82	54.7
	Negative	25	16.7
	Not sure	43	28.7
Action taken for infected animal.	Let them free	19	9.3
	Kill them	74	52.7
	Tie them	57	38.0
How to control stray dogs.	Kill them	50	33.3
	Inform to owner	52	34.7

Table no.3 show that the people attitude towards rabies. 54.7% (82) people had positive attitude towards vaccination and 16.7% (25) negative attitude and 28.7% (43) was not sure. Action taken for infected animal 9.3% (19) let them free, 52.7% (74) kill them and 33.3% (50) agree with kill them, how to control stray dog 33.3% (50) agree with kill them immediately, 34.7% (52) inform to owner and 32.0% (48) agree with control their birth. According to this table most of the people was agree with vaccination. They have positive attitude towards vaccination.

Table 4. Practice Regarding Rabies

Statement	Frequency	percent
Do you have dog at home?	yes	52 34.7
	No	94 62.7
	Not sure	4 2.7
Do you have vaccinated dog?	Yes	39 26.0
	No	109 72.7
	Not sure	2 1.3
Do have experience of dog bite?	Yes	30 20.0
	No	117 78.0
	Not sure	2 1.
Immediate action after bite?	Wash wound with soap	47 31.3
	Use herbal extract	58 38.7
	Not sure	45 30.0

According to table no.4 34.7 % (52) people had dog at home, 62.7 % (94) no and 2.7 % (4) neutral. Only 26.0%(39) had vaccinated dogs, 72.7%(109) had non vaccinated dogs and 1.3%(2) was not sure about vaccine.20.0%7(30) had experience of dog bite, 78.0%(117) was not any experience of bite only 1.3%(2) was not sure. Immediate action after dog bite 31.3 % (47) agree with wash with soap, 38.7 % (58) use herbal extract and majority of 30.0 % (45) not sure about immediate action.

V. DISCUSSION

The results of the study show that there is generally good knowledge about rabies among the community people of Hussain Abad. The study was aimed at determining the knowledge, attitude and practice regarding rabies among the people of rural community of Lahore among age 15- <45years.

Thus the study revealed that in Gonder, Amhara regional state, Ethiopia 416 respondent interviewed about rabies 60.3% people had good knowledge about rabies but they have poor attitude towards vaccination. Only 54.7% people have positive attitude towards vaccination. The people of the rural community have knowledge about animal bite. 63.3% people already know about rabies but there are

still gaps most of the people did not know that it is fatal disease. 78% people are unaware about disease fatality. It was observed that people are unaware regarding post exposure prophylaxis. Study conducted in Kenya 2013 community population did not concern with cause and modes of transmission. 60.1% are unaware about post exposure of disease. According to this study 42.7% people have lack of knowledge about treatment and after appearance of sign and symptoms of disease. Attitude towards anti rabies are not good in the community 54.7% people were aware about vaccination but only 26% have vaccinated dog in their houses. 38.7% people believed on herbal extract. Practices regarding post exposure are not good.

LIMITATIONS

This study was cross sectional. Practices related to post exposure of rabies disease cannot be observed in the community.

V.1 CONCLUSION

The results of this study conclude that community people have inappropriate knowledge regarding rabies fatality and its effects on body. Generally, there is lack of knowledge about the practice of vaccination against rabies and its implications. Attitude towards anti rabies are not good in the community. People were aware about vaccination but only some have vaccinated dog in their houses. People believed on herbal extract. Practices regarding post exposure are not good.

ACKNOWLEDGEMENT

Author's heart is filled with the feeling of gratitude toward God Almighty and then all the faculty of Lahore School of Nursing especially Mr. Muhammad Afzal, Mr. Muhammad Hussain and Miss. Iram Majid who guided through every step of this work. Authors also feel grateful to her family and friends especially her mother for always remaining encouraging and supporting in every aspect of life.

REFERENCE

- ARSI ZONE, SOUTHEASTERN ETHIOPIA. *JOURNAL OF PUBLIC HEALTH AND EPIDEMIOLOGY*, 9(6), 161-170.
- Dictionary, O. E. (2007). Oxford English dictionary online: JSTOR.
- Digafe, R. T., Kiflew, L. G., & Mechesso, A. F. (2015). Knowledge, attitudes and practices towards rabies: questionnaire survey in rural household heads of Gondar Zuria District, Ethiopia. *BMC research notes*, 8(1), 400.
- Hossain, M., Ahmed, K., Bulbul, T., Hossain, S., Rahman, A., Biswas, M., & Nishimoto, A. (2012). Human rabies in rural Bangladesh. *Epidemiology & Infection*, 140(11), 1964-1971.
- Kumarasamy, K. K., Toleman, M. A., Walsh, T. R., Bagaria, J., Butt, F., Balakrishnan, R., Irfan, S. (2010). Emergence of a new antibiotic resistance

- mechanism in India, Pakistan, and the UK: a molecular, biological, and epidemiological study. *The Lancet Infectious Diseases*, 10(9), 597-602.
- Merriam-Webster. (2004). *Merriam-Webster's collegiate dictionary*: Merriam-Webster.
- Moges, N. (2015). Epidemiology, Prevention and Control Methods of Human Rabies.
- Rupprecht, C. E., Briggs, D., Brown, C. M., Franka, R., Katz, S. L., Kerr, H. D, Schaffner, W. (2010). Use of a reduced (4-dose) vaccine schedule for post exposure prophylaxis to prevent human rabies: recommendations of the advisory committee on immunization practices. *MMWR Recomm Rep*, 59(RR-2), 1-9.
- Sambo, M., Lembo, T., Cleaveland, S., Ferguson, H. M., Sikana, L., Simon, C., Hampson, K. (2014). Knowledge, attitudes and practices (KAP) about rabies prevention and control: a community survey in Tanzania. *PLoS neglected tropical diseases*, 8(12), e3310.
- Susilawathi, N. M., Darwinata, A. E., Dwija, I. B., Budayanti, N. S., Wirasandhi, G. A., Subrata, K., Mahardika, G. N. (2012). Epidemiological and clinical features of human rabies cases in Bali 2008-2010. *BMC infectious diseases*, 12(1), 81.
- Tschopp, R., Bekele, S., & Aseffa, A. (2016). Dog demography, animal bite management and rabies knowledge-attitude and practices in the Awash Basin, Eastern Ethiopia. *PLoS neglected tropical diseases*, 10(2), e0004471.
- Walter, E. (2008). *Cambridge Advanced Learner's Dictionary Hardback with CD-ROM for Windows and Mac Klett Edition*: Ernst Klett Sprachen.
- Wasay, M., Malik, A., Fahim, A., Yousuf, A., Chawla, R., Daniel, H., Razzak, J. (2012). Knowledge and attitudes about tetanus and rabies: a population-based survey from Karachi, Pakistan. *Journal of the Pakistan Medical Association*, 62(4), 378.
- Yalemebrat, N., Bekele, T., & Melaku, M. (2016). Assessment of public knowledge, attitude and practices towards rabies in Debarq Woreda, North Gondar, Ethiopia. *Journal of Veterinary Medicine and Animal Health*, 8(11), 183-192.

IJSER