Title of Research article: “**Knowledge of rabies among dog bite victims in Srinagar, Kashmir”**

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**“Knowledge of rabies among dog bite victims in Srinagar, Kashmir”**

**Abstract**

**Objective:** In Asia, rabies features a long history geological dating back to antiquity. For millennia, the disease had been thought-about an endemic for its prevalence. Rabies could be a serious public health concern, notably in Asia and the African continent. In my study, it will be seen how vital the awareness of rabies is.

**Methods:** The present study was carried in Srinagar district. Regarding the knowledge of people, the interview schedule was formulated. As per Srinagar Municipal Corporation (SMC), the city is divided into two divisions; four zones and 34 wards. To exploit the diversity of population response, all the four zones were considered for the present investigation.

**Results:** Regarding the knowledge of the disease rabies only a few, 15 % knew its transmission method. Only 15% knew about the identification of rabid dog and they also knew about its signs and symptoms. Following a suspect bite majority, 52.50% claimed they would seek medical care after the bite. About 100 % were aware they would go to the hospital after the bite. Only a few, 20% knew about the application of first aid before reaching the hospital.

**Discussion:** The study showed that victims lacked a complete perception of rabies. Factors influencing little awareness included lower socioeconomic rank and education suggesting that the maximum menace of rabies is probable to fall on the susceptible sectors of society, particularly poor members with slight or no proper education. The lack of inclusive awareness might interpret into elevated mortality allied to rabies. There is a need for sensitization of people so that their information can be improved and their optimistic attitude could be translated into apt practices for prevention/control of rabies.

Keywords: Knowledge, Rabies, Dog bites, Victims, People, Srinagar,Kashmir

**INTRODUCTION**

In Asia, rabies features a long history geological dating back to antiquity. For millennia, the disease had been thought-about an endemic for its prevalence [1]. Rabies could be a serious public health concern, notably in Asia and the African continent [2]. Regarding 563 million US bucks are being employed for rabies within the world, nonetheless in countries of south-eastern Asia; the disease remains a very important public pathological state [3]. In India, the disease is currently in widespread except within the islands of Lakshadweep, Andaman, and Nicobar [4]. Over three million vaccine units are employed annually as the post-exposure prophylaxis in India [5]. For a decade, the incidence of rabies in India has remained constant, with none obvious declining trend and the rumoured incidence is perhaps sarcasm of true incidence, as a result of not being a notifiable disease [6]. This example is nonmoving in a very general lack of awareness of preventive measures that interprets into low dog vaccination, associate uncontrolled canine population, poor data of correct post-exposure prophylaxis on a part of several medical professionals, associated an irregular offer of anti-rabies vaccine and Immunoglobin, notably in primary-health-care facilities.

A recently applied dog census has found 91,000 dog populations in Srinagar town alone [7]. If we tend to compare this with the human population, it makes one dog for every twelve people. The census information of dog population from alternative districts doesn’t seem to be obtainable. However, in a very stunning revelation on dog menace in the geographic region, a minimum of eighty persons has died of rabies within the past five years whereas 80,000 dog bites are reported in the valley [8]. Kashmir valley had witnessed 26932 dog bites in 2017 out of that 9514 cases were from Srinagar [9]. The dog bites were 80% from urban spaces and 20% from the agricultural area. Rabies post exposure prophylaxis is being provided free at an anti-Rabies clinic of Shri Maharaja Hari Singh hospital Srinagar that bears the most loads of bite cases. In this study we will see the perception of the people regarding the disease rabies.

**Research Methodology**

The purpose is to know the knowledge of people about rabies and thereby the selection of such people comes in front which was done using the below-mentioned sampling plan within the Srinagar district. As per Srinagar Municipal Corporation (SMC), the city is divided into two divisions, four zones and 34 administrative wards (Table 1). The four administrative zones are North, South, East, and West. To maximize the diversity of population response, all the four zones were considered for the present investigation. From each zone, 4 wards were selected randomly making a total of 16 wards. The wards that were selected were shown in table 1 with yellow colour. From each randomly selected ward, 10 households exposed to rabies/dog bite were selected as respondents for data collection (accidental sampling). Thus a total of 160 respondents were the sample size for investigating the knowledge of rabies vis-a-vis dog bite exposure among the human population. Our appraisal consisted of semi-structured polls with each open and closed-ended question that was worn to grab the study’s objectives. For estimating the knowledge of rabies six domains casing a description of rabies, its mode of transmission, medical signs, and prevention/control had been used. There were some reasonably categorized questions to facilitate the respondents to give petite answers in their own terms, accompanied by a catalogue of precise answers like yes, no, don’t know. Predefined options craft study easier by listing likely responses after the respondent gave the answer. Classification of predefined retort was done as poor; fair; good. Coding of polls retort was approved out as poor, medium or high. Scores were specified beneath the wholeness plus correctness of respondents’ answers. Finally, the chi-square test, Fisher exact test was accustomed to inspecting the connection amongst variables and consequently, the files had analyzed the using of the SPSS 20.0 software.

**Ethics Statement**

The study was approved by faculty of veterinary and animal husbandry Srinagar, Kashmir, India. Our questionnaire consisted of semi-structured polls with each open and closed-ended question that was worn to grab the study’s objectives. For estimating the knowledge of rabies six domains casing a description of rabies, its mode of transmission, medical signs, and prevention/control had been used. The verbal informed consent was obtained from the victims. There were some moderately categorized questions that required respondents to afford short answers in their own words, accompanied by a list of accurate answers as well as options like yes, no, don’t know. Some filled the questionnaire themselves. Others told me orally and I filled it. Scores were given under the completeness and accuracy of respondents’ answers.

**Results**

Table 2 exhibits the distribution of respondents according to socioeconomic profile zone wise. It revealed that the majority of respondents were males 75% and 25% were females. The maximum age was ranging in 30-40 (22.50%) and the remaining were others. The majority 72.50% belonged to lower sections of the society. Merely 25 % had attended college level, with just 17.50% upper primary, whilst others had no formal education. About 50% were labourers. Regarding monthly income, 25% had Rs 40, 000-50, 000, whilst others had below 50,000. Statistically revealed there is a non-significant difference with diverse zones. Table 3 comprised of six questions to confirm the knowledge of the disease Rabies. It revealed percentage distribution according to varied zones i.e. (North, West, South, and East). The majority 85% were not aware of the disease rabies. The overall score of the knowledge of the disease rabies was poor (Table 4). Statistically, there is a non-significant difference amid varied zones. Regarding the knowledge of the disease rabies only a few, 15 % knew its transmission method (Table 5). The overall score of the knowledge about the transmission of rabies was poor (Table 6). Statistically, there is a non-significant difference amid varied zones. Only 15 % knew about the identification of rabid dog and they also knew about its signs and symptoms (Table 7). The overall score of the knowledge about the clinical signs of rabies was poor (Table 8). Statistically, there is a significant difference amid varied zones. Following a suspect bite majority, 52.50% claimed they would seek medical care after the bite (Table 9). About 100 % were aware they would go to the hospital after the bite. All responded to the treatment is done at SMHS hospital. Only a few, 20% knew about the application of first aid before reaching the hospital. Whilst ask what treatment bite patients expect at the hospital, 10% reported about anti-rabies vaccination. When asked about the indigenous treatments 60% claimed this is of no use. While 15 % were aware of the treatment of rabies in dogs. When asked on what actions to be taken with regards to a suspect rabid animal, 10% said they would kill the animal and bury it. The overall score of the knowledge about the treatment of rabies was poor (Table 10). Statistically, there is a non-significant difference amid varied zones. It is evident from the table 11 that 15 % were aware of the prevention of rabies. The overall score of the knowledge about the prevention/control of rabies was poor (Table 12). Statistically, there is a significant difference amid varied zones. With regards to knowledge of dog population control measures, just 7.5% were aware of the dog population control program (Table 13). The overall score of the knowledge about the dog population control was poor (Table 14). Statistically, there is a non-significant difference amid varied zones. The overall score of the knowledge of rabies was poor (Table 15). Statistically, there is a significant difference amid varied zones.

**Discussion**

Rabies is a noteworthy public vigour enigma in Srinagar, where canine rabies is not managed, plus the bite of an infected dog is the common means of transmission. Our verdicts reveal that the majority of victimized people lack a complete perception of rabies. These findings are in agreement with the findings of [7,8,4,9]. Few victims had heard of rabies *(halkaer houn*) and their source of information was from family, friends, neighbors and some got from the printed materials. Some of the people, who affirmed that they had heard of rabies, had possibly not in reality but perhaps they did not want to emerge innate. Radio and TV were not answered by any person. The basis could be the media which is more reachable had not been well exploited as a basis of information plus awareness of rabies. Whenever any person is bitten by a dog the people gather there and advise them to visit the Shri Maharaja Hari Singh Hospital (*SMHS)*.The study in Srinagar found that few victims knew dogs plus man can endure from rabies. Only some knew about other animals as a cause of transmission of rabies to humans. Bite was being mentioned by the minority of the victims as a means of transmission This could due to lack of complete acuity of the disease rabies. The incubation period of rabies is extremely uneven ranging as of few days to several years inclined by a lot of factors. The most regularly mentioned incubation period by the respondents was 10 days. Persons who think the incubation period is petite might not seek out post exposure prophylaxis once the apparent incubation period has conceded. This is grave for rabies patients where death is 100% once the clinical signs have developed. Only a number of victims knew regarding the identification of rabid dogs. In our community rabies is well-known as mad dog (*halkaer houn*) which is allied through aggression. Aggression was thus known by little which is in stroke amid the verity that furious form of rabies is widespread in animals. A few victims knew about the sign of rabies in humans. Regarding about the treatment, half were aware that the Shri Maharaja Hari Singh Hospital *(SMHS)* provides vaccines and majority didn’t choose any traditional methods. Merely some said they would choose the traditional medicine following a bite. Possibly people are more awake of the modern medicine plus they do not depend as much on the traditional medicine. The reason is the traditional medicine takes longer duration to act as compared with the modern medicine. A decisive part of post exposure prophylaxis is instant washing of the bite wound by means of water prior to hospital and nearly the majority was ignorant of this precautionary practice. The low retort on first aid measures is due to the verity that the study is done in Srinagar district, which had acknowledged no awareness campaigns. Besides, there was poor awareness regarding the fatal nature of rabies and how it can be vetoed in human. The people were not aware about the prevention of rabies. The people were not aware whether the carcasses should be incinerated or buried to stop the transmission of rabies to foragers. Anti rabies schedule; the majority was not awake about it. The reason is there is no national rabies control program in Srinagar. Hence people possess inadequate knowledge of rabies particularly the risks linked amidst bites from dogs. This suggests that human deaths happen due to a lack of awareness.

The dog victims lacked a complete perception of rabies. This could be due to low socioeconomic rank and education suggesting that the maximum menace of rabies is possible to fall on the susceptible sectors of society, particularly poor members with slight or no proper education. Low levels of knowledge on rabies and poor practice with concerns to rabies control and prevention in communities ponder the absence of higher-level engagement to a national program to restrain and stop dog bites in Srinagar. Most maximum of our cases was of low socioeconomic rank. That shows an excessive amount of cases from poor families that suffered dog bites. Our results revealed that fewer respondents were oblivious of the need for prompt washing of the wound by water and soap. This reason could be lack of health professionals’ knowledge, which is the central determinant of appropriate practice for the patient. Our investigation reported victims would seek medical attention, because the people gather there and advise them to visit the Shri Maharaja Hari Singh Hospital (*SMHS)*.This communication, in turn, could be improved by public awareness of the threats of rabies and could, consequently, stop additional human rabies deaths. Most maximum victims stated they would kill the biting animal outwardly apprising officers. This could be because there are numerous dogs in Srinagar and reporting of dog bite incidents. This makes it challenging for medical services to understand the range of the enigma and take relevant steps to limit extra transmission. Educational information should symbolize that all mammals suffer from rabies and that carcasses should be incinerated or buried to stop the transmission of rabies to foragers. There is no national rabies control program in Srinagar. Hence people possess inadequate knowledge of rabies particularly the risks linked amidst bites from dogs. While there is no national policy to control rabies, most utmost respondents got knowledge about rabies from people when they suffered a bite. It is hence essential to propose rabies in the teaching curricula in schools, where it is currently juggling and as kids are the usual often affected by rabies. Repeatedly families with a memoir of exposure appear to have greater levels of knowledge, gained as a consequence of input from clinicians. People should be told of these easy first aid means that they should practice before consulting a doctor. Concerning the prevention of human rabies deaths, both the people and health practitioners should be informed of how rabies is spread, what animals suffer from rabies and how it is restricted. Understanding the hazards connected with rabies could raise the balance of bite victims who receive PEP. Proper management of PEP is crucial for protecting the lives of imperiled people. Information on the hazards of rabies from clinicians is necessary but is usually too delayed. Education should be implemented on deterrent measures, for instance utilizing mass media before a rabid dog bites someone. A deficiency of complete plus exact knowledge about disease bar and the hazards linked amidst rabies held among many of the respondents. The maximum menace of rabies is probable to fall on the mainly susceptible sectors of society, particularly poor members with slight or no proper education. The lack of inclusive awareness might interpret into elevated mortality allied to rabies. There is a need for sensitization of people so that their information can be improved and their optimistic attitude could be translated into apt practices for prevention/control of rabies.

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**Tables**

**Table 1: Different zones and the wards of Srinagar district as per Srinagar Municipal Corporation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Wards** | **North zone**  **(9 wards)** | **South zone**  **(9 wards)** | **East zone**  **(8 wards)** | **West zone**  **(8wards)** |
| 1 | Tarbal, JamiaMasjid,Kawdara | Malroo, Lawaypora | Harwan, Nishat | SafaKadal, IddGah |
| 2 | Zadibal,Madeen Sahib | BeminaKhumaniChowk | Dalgate, Lalchowk | Palpora |
| 3 | Lal Bazaar, Umer Colony | AllochiBagh, MagermalBagh | Dud Dal, Locut dal | Nawab Bazaar, Ali Kadal |
| 4 | Hazratbal,Tailbal | Rajbagh, JawaharNagar,WazirBagh | JogiLankar, Zindashah Sahib | Syed Ali Akbar, Islam Yarbal |
| 5 | New Theed, Alusteng | Mahjoor Nagar, Natipora, Chanapora | Ganpatyar, Barbarshah | Shaheed Gung, Karan Nagar |
| 6 | Zakoora | BaghatBarzallua, Rawalpora | BanaMohalla,ChinkralMohalla, S.R.Gung | Qamarwari, Chattabal |
| 7 | Ahmad Nagar | Humhama | Akil Mir Khanyar, Khaja Bazar | Bemina East, BeminaWest |
| 8 | Soura, Buchpora | PanthaChowk, Khanmoh | Hasna Abad, Makhdoom Sahib | Parimpora, Zainakote |
| 9 | Nowshahra, Zoonimar | S.D.colonyBatamaloo  Nundrash colony |  |  |

***Note: The wards revealed with yellow colour signify sampled area.***

**Table 2. Distribution of victimized respondent according to socioeconomic profile**

| **(Socio-economic profile)** | **Zones** | | | | |
| --- | --- | --- | --- | --- | --- |
| **NORTH** | **WEST** | **SOUTH** | **EAST** | **Pooled** |
| n | | | | N |
| **Gender** | 10 | 10 | 10 | 10 | 40 |
| Male | 7(70) | 9(90) | 6(60) | 8(80) | 30(75) |
| Female | 3(30) | 1(10) | 4(40) | 2(20) | 10(25) |
| fisher exact test=0.6218 | | | | | |
| **Age** | | | | | |
| 1-10 | 2(20) | 3(30) | 2(20) | 3(30) | 10(25) |
| 10-20 | 1(10) | 1(10) | 3(30) | 2(20) | 7(17.50) |
| 20-30 | 2(20) | 1(10) | 2(20) | 1(10) | 6(15) |
| 30-40 | 3(30) | 3(30) | 1(10) | 2(20) | 9(22.50) |
| 40-50 | 1(10) | 1(10) | 1(10) | 1(10) | 4(10) |
| 50-60 | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) |
| >60 | 1(10) | 1(10) | 1(10) | 1(10) | 4(10) |
| mean | 24 15.28 | 22.11 13.20 | 27.66 12.34 | 28.11 12.08 | 32.6613.68 |
| **Caste** | | | | | |
| General | 3(30) | 1(10) | 5(50) | 2(20) | 11(27.50) |
| OBC | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) |
| OSC | 7(70) | 9(90) | 5(50) | 8(80) | 29(72.50) |
| other options (ST, any other caste) | | | | | |
| **Education** | | | | | |
| Lower primary | 2(20) | 3(30) | 2(20) | 3(30) | 10(25) |
| Upper primary | 1(10) | 1(10) | 3(30) | 2(20) | 7(17.50) |
| Sec school | 2(20) | 1(10) | 1(10) | 1(10) | 5(12.50) |
| College | 3(30) | 3(30) | 2(20) | 2(20) | 10(25) |
| University professional/post graduate | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) |
| Currently a student | 1(10) | 1(10) | 1(10) | 1(10) | 4(10) |
| No school | 1(10) | 1(10) | 1(10) | 1(10) | 4(10) |
| fisher exact test=1 | | | | | |
| **Employment** | | | | | |
| Government employee | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) |
| Businessman | 3(30) | 3(30) | 2(20) | 2(20) | 10(25) |
| Laborers | 4(40) | 5(50) | 5(50) | 6(60) | 20(50) |
| Contractors | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) |
| Daily wagers | 2(20) | 1(10) | 2(20) | 1(10) | 6(15) |
| Student | 1(10) | 1(10) | 110) | 1(10) | 4(10) |
| fisher exact test=0.998 | | | | | |
| **Monthly income(Rs)** | | | | | |
| > or = 80,000 | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) |
| 50,000-70,000 | 1(10) | 1(10) | 1(10) | 1(10) | 4(10) |
| 40,000-50,000 | 3(30) | 3(30) | 2(20) | 2(20) | 10(25) |
| 20,000-30,000 | 2(20) | 1(10) | 2(20) | 1(10) | 6(15) |
| < or=10,000 | 4(40) | 5(50) | 5(50) | 6(60) | 20(50) |
| fisher exact test=0.998 | | | | | |

*Figures in parenthesis indicate percentage, n indicates sample size, “N” total sample size,\*indicates significant difference at 5 % level of significance*

**Knowledge Level on Different Domains of rabies**

**Table 3. Distribution of victimized respondents according to knowledge about disease rabies**

| **Knowledge of disease rabies** | | | **Zones** | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **North** | **West** | **South** | **East** | **Pooled** |
| Question | Response | | **10** | **10** | **10** | **10** | **40** |
| n | | | | N |
| Heard the term “Rabies” | Yes | | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| No | | 8(80) | 10(100) | 7(70) | 9(90) | 34(85) |
| If yes, mention source(N=6) | Brochure, posters & other printed materials | | 1(50) | 0(0.00) | 1(33.33) | 0(0.00) | 2(33.33) |
| Family friends, neighbors & colleagues | | 0(0.00) | 0(0.00) | 2(66.66) | 0(0.00) | 2(33.33) |
| When I was bitten by a dog | | 1(50) | 0(0.00) | 0(0.00) | 1(100) | 2(33.33) |
| other options(Radio, TVs, Vet officials ,Religious leaders, Teachers,) | | | | | | | |
| Species suffer | | Human | 5(50) | 3(30) | 1(10) | 1(10) | 10(25) |
| Animal | 3(30) | 2(20) | 6(60) | 5(50) | 16(40) |
| Both | 2(20) | 5(50) | 3(30) | 4(40) | 14(35) |
| Other carrier of disease | | Dogs | 3(30) | 2(20) | 6(60) | 5(50) | 16(40) |
| Man | 5(50) | 3(30) | 1(10) | 1(10) | 10(25) |
| All the above | 2(20) | 5(50) | 3(30) | 4(40) | 14(35) |
| Cause of rabies | | Virus | 1(10) | 0(0.00) | 2(20) | 0(0.00) | 3(7.50) |
| Don’t know | 9(90) | 10(100) | 8(80) | 10(100) | 37(92.50) |
| Description of the disease rabies | | Correctly described | 2(20) | 0(0.00) | 2(20) | 0(0.00) | 4(10) |
| Incorrect description | 8(80) | 10(100) | 8(80) | 10(100) | 36(90) |

*Figures in parenthesis indicate percentage, n indicates sample size, “N” total sample size*

**Table 4. Cumulative knowledge score of disease rabies**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Level** | **North** | **West** | **South** | **East** | **Pooled** |
| Poor | 25 | 30 | 23 | 29 | 107 |
| Fair | 16 | 10 | 14 | 12 | 52 |
| Good | 11 | 10 | 16 | 10 | 47 |
| **χ2** =4.748, p=0.576 | | | | | |

*\*indicates significant difference at 5 % level of significance*

**Table 5. Distribution of Victimized respondents according to knowledge about transmission of disease rabies**

|  | | **Zones** | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **NORTH** | **WEST** | **SOUTH** | **EAST** | **pooled** |
| n | | | | N |
| Question | Response | 10 | 10 | 10 | 10 | 40 |
| Methods of rabies transmission | Animal to human | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| All the above | 8(80) | 10(100) | 7(70) | 9(90) | 34(85) |
| Other options(Animal to Animal, Human to Animal, Human to Human) | | | | | | |
| Dog transmission | Other dog bite | 8(80) | 10(100) | 7(70) | 9(90) | 34(85) |
| (all) | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| Other options(Ingesting rabid dog/dead animal, Biting by other animal, Wild animal) | | | | | | |
| Dogs transmit rabies to humans | Yes | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| No | 8(80) | 10(100) | 7(70) | 9(90) | 34(85) |
| Other animals transmission | (both) | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| don’t know | 8(80) | 10(100) | 7(70) | 9(90) | 34(85) |
| Other options(Dogs, Cats) | | | | | | |
| Rabies transmission to humans | Through bites | 8(80) | 10(100) | 7(70) | 9(90) | 34(85) |
| All the above | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| Other options(Through scratches, by licking, others) | | | | | |  |
| A healthy dog transmit rabies to humans | Yes | 8(10) | 10(10) | 7(70) | 7(70) | 32(80) |
| No | 2(20) | 0(0.00) | 3(30) | 3(30) | 8(20) |
| You have seen a person with rabies | Yes | 3(30) | 2(20) | 1(10) | 1(10) | 7(17.50) |
| No | 7(70) | 8(80) | 9(90) | 9(90) | 33(82.50) |
| If yes, mention source(N=7) | Real life | 3(100) | 2(100) | 1(100) | 1(100) | 7(100) |
| Other option(Television) | | | | | |  |
| Rabies is communicable | Yes | 8(80) | 10(100) | 7(70) | 9(90) | 34(85) |
| No | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |

*Figures in parenthesis indicate percentage, n indicates sample size, “N” total sample size*

**Table 6. Cumulative knowledge score about transmission of rabies**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **level** | **Zones** | | | | **Pooled** |
| **North** | **West** | **South** | **East** |
| Poor | 47 | 58 | 47 | 52 | 204 |
| Fair | 16 | 20 | 14 | 18 | 68 |
| Good | 20 | 4 | 23 | 11 | 58 |
| **χ2** =18.195 p=0.005\* | | | | | |

*\*indicates significant difference at 5 % level of significance*

**Table 7. Distribution of victimized respondents according to knowledge about clinical signs of rabies**

| Clinical signs of rabies | | **Zones** | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **North** | | **West** | **South** | **East** | **pooled** |
| **n** | | | | | **N** |
| Question | Response | 10 | | 10 | 10 | 10 | 40 |
| Identification of a rabid dog | Yes | 2(20) | | 0(0.00) | 3(30) | 1(10) | 6(15) |
| No | 8(80) | | 10(10) | 7(70) | 9(90) | 34(85) |
| If yes, signs & symptoms of a rabid dog (N=6) | Aggression | 2(100) | | 0(0.00) | 3(100) | 1(100) | 6(100) |
| Other options(Salivation, Biting inmate objects, Anxious,Others, All) | | | | | | | |
| A normal behavior dog can also be a rabid dog | Yes | 8(80) | | 10(10) | 7(70) | 9(90) | 34(85) |
| No | 2(20) | | 0(0.00) | 3(30) | 1(10) | 6(15) |
| The signs & symptoms of a person who develop rabies | Fever | 8(80) | | 10(10) | 7(70) | 9(90) | 34(85) |
| All | 2(20) | | 0(0.00) | 3(30) | 1(10) | 6(15) |
| Others options( Chills, Fatigue, Lack of appetite, Headache Problem sleeping, Irritability, Anxiety, Sore throat, Vomiting, Aggressive behavior, such as thrashing out or biting, Hallucinations----seeing or hearing things that are not real, Delusions---believing things that are obviously untrue, Excessive production of saliva, Excessive sweating, Hair on their skin stands up | | | | | | | |
| The disease can occur in human after the dog bite | do not know | | 10  (10) | 10  (10) | 10  (10) | 10  (10) | 40  (100) |
| Other options(10,15.30,90,days,varies from person to person) | | | | | | |  |
| The disease can be cured after the onset of signs in humans | Yes | | 8(80) | 10(10) | 7(70) | 9(90) | 34(85) |
| No | | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| The chance of survivability once the symptoms develop | No response | | 10(10) | 10(10) | 10(10) | 10(10) | 40(100) |
| Other options(No chance of survival, Percent chance) | | | | | | | |

*Figures in parenthesis indicate percentage, n indicates sample size, “N” total sample size*

**Table 8. Cumulative Knowledge score about clinical signs of rabies**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Level | Zones | | | | Pooled |
| North | West | South | East |
| Poor | 44 | 50 | 41 | 47 | 182 |
| Fair | 8 | 10 | 7 | 9 | 34 |
| Good | 10 | 0 | 15 | 5 | 30 |
| **χ2** =18.172 , p=0.005\* | | | | | |

*\*indicates significant difference at 5 % level of significance*

**Table 9. Distribution of Victimized respondents according to knowledge about treatment of rabies**

| **Treatment of rabies** | | | **zones** | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **North** | **West** | **South** | **East** | **pooled** |
| n | | | | N |
| Question | Response | | 10 | 10 | 10 | 10 | 40 |
| Measures taken for dog bite | approach hospital immediately | | 5(50) | 5(50) | 7(70) | 4(40) | 21(52.50) |
| approach hospital later on | | 5(50) | 5(50) | 3(30) | 6(60) | 19(47.50) |
| Other options( no need to approach hospital if wound is not much complicated, don’t know) | | | | | | | |
| The treatment should be started after the dog bite | Immediately | | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| Later | | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) |
| don’t know | | 8(80) | 10(10) | 7(70) | 9(90) | 34(85) |
| If bitten the treatment is received | Doctor /Hospital | | 10(10) | 10(10) | 10(10) | 10(10) | 40(100) |
| Other options(Traditional healers, uncertain) | | | | | | | |
| The treatment is done at | SMHS | | 10(10) | 10(10) | 10(10) | 10(10) | 40  (100) |
| Other options(Skims, Khyber, all) | | | | | | | |
| First aid | Washing with soap | | 2(20) | 0(0.00) | 3(30) | 3(30) | 8(20) |
| All | | 8(80) | 10(10) | 7(70) | 7(70) | 32(80) |
| other options**(**Applying garlic, antiseptic, suturing, cauterization) | | | | | | | |
| The treatment you expect at the hospital | Pain killer | | 1(10) | 1(10) | 1(10) | 2(20) | 5(12.50) |
| Vaccination (Anti Rabies Vaccine) | | 1(10) | 1(10) | 1(10) | 1(10) | 4(10) |
| Dress wound | | 8(80) | 8(10) | 7(70) | 7(70) | 30(75) |
| Other options (Antibiotic, Tetanus, All) | | | | | | | |
| Indigenous treatment available for rabies | Yes | 4(40) | | 6(4) | 2(20) | 4(40) | 16(40) |
| No | 6(60) | | 4(40) | 8(80) | 6(60) | 24(60) |
| If yes, anyone from these(N=16) | Application of herbs | 2(12.50) | | 2(12.50) | 1(6.25) | 2(12.50) | 7(43.75) |
| Ayurvedic treatment | 1(25) | | 2(33.33) | 1(10) | 1(10) | 5(31.25) |
| Application of kerosene | 1(25) | | 1(16.66) | 0(0.00) | 1(10) | 3(18.75) |
| Clean dressing | 0(0.00) | | 1(16.66) | 0(0.00) | 0(0.00) | 1(6.25) |
| Other options( Magi co –religious (faith healing, holy water, witchcraft, Clean dressing, Cauterization ,All) | | | | | | | |
| It is safe to treat the victim in the traditional way | Yes | 4(40) | | 6(4) | 2(20) | 4(40) | 16(40) |
| No | 6(60) | | 4(40) | 8(80) | 6(60) | 24(60) |
| Treatment of rabies in dogs | Yes | 2(20) | | 0(0.00) | 3(30) | 1(10) | 6(15) |
| No | 8(80) | | 10(10) | 7(70) | 9(90) | 34(85) |
| You suspect a dog was rabid | Immediately kill the dog | 2(20) | | 0(0.00) | 1(10) | 1(10) | 4(10) |
| Report to vet. Officer | 2(20) | | 0(0.00) | 3(30) | 1(10) | 6(15) |
| I would not take any action | 6(60) | | 10(10) | 6(60) | 8(80) | 30(75) |
| Immediately kill the dog, Report to vet. Officer |  | |  |  |  |  |
| don’t know | 0(0.00) | | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) |
| If your answer to above question is to kill, what would you practice(N=4) | throw it away | 2  (100) | | 0  (0.00) | 1  (100) | 1  (100) | 4  (100) |
| Other options (Burn, Bury, Cut the head & sent to the vet. Officer) | | | | | | | |

*Figures in parenthesis indicate percentage, n indicates sample size, “N” total sample size*

**Table 10. Cumulative knowledge score about treatment of rabies**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Level | Zones | | | | Pooled |
| North | West | South | East |
| Poor | 58 | 66 | 55 | 59 | 238 |
| Fair | 0 | 0 | 0 | 0 | 0 |
| Good | 48 | 40 | 48 | 46 | 182 |
| fisher exact test=0.575 | | | | | |

*,\*indicates significant difference at 5 % level of significance*

**Table 11. Distribution of respondents according to prevention /control of rabies**

| **Prevention /control of rabies** | | **Zones** | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| n | | | | N |
| NORTH | WEST | SOUTH | EAST | pooled |
| Question | Response | 10 | 10 | 10 | 10 | 40 |
| The occurrence of rabies in animals can be prevented | Yes | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| No | 8(80) | 10(10) | 7(70) | 9(90) | 34(85) |
| If yes, mention methods (N=6) | control the dog population | 2  (100) | 0  (0.00) | 3  (100) | 1  (100) | 6  (100) |
| Other options(Kill all the rabid dogs, vaccinate the dogs, Avoid pet rearing, kill all the stray dogs) | | | | | | |
| Any way to prevent rabies in humans | Yes | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| No | 8(80) | 10(10) | 7(70) | 9(90) | 34(85) |
| If yes, the occurrence of rabies can be prevented in animals (N=6) | Go for the treatment immediately after being bitten by any animal | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| Other options(avoid all rabid dogs, burn/bury all suspected rabid animals, vaccinate dogs annually, don’t know) | | | | | | |
| The anti rabies vaccination can be | Don’t know | 8(80) | 10(10) | 7(70) | 9(90) | 34(85) |
| post/pre | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| There is a proper schedule of rabies vaccine | Incorrect description | 10(40) | 10(40) | 10(40) | 10(40) | 40(100) |
| other option (correct description) | | | | | | |
| Anti rabies injection site | Abdomen | 6(60) | 10(10) | 6(60) | 8(80) | 30(75) |
| Deltoid | 2(20) | 0(0.00) | 1(10) | 1(10) | 4(10) |
| Gluteus | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| All | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) | 0(0.00) |
| Rabies immunization | post exposure vaccination prevents the disease | 2(20) | 0(0.00) | 3(30) | 1(10) | 6(15) |
| don’t know | 8(80) | 10(10) | 7(70) | 9(90) | 34(85) |
| other options (booster doses given to vaccinated individuals, tetanus after dog bite, pre exposure vaccination to high risk population, pre exposure vaccination to high risk population, vaccination done in pregnancy) | | | | | | |

*Figures in parenthesis indicate percentage, n indicates sample size, “N” total sample size*

**Table 12. Cumulative knowledge about prevention/control of rabies**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| level | Zones | | | | Pooled |
| North | West | South | East |
| Poor | 42 | 50 | 38 | 46 | 176 |
| Fair | 10 | 10 | 10 | 10 | 40 |
| Good | 12 | 0 | 18 | 6 | 36 |
| **χ2** =21.545 , p =0.001\* | | | | | |

*\*indicates significant difference at 5 % level of significance*

**Table 13. Distribution of knowledge of Victimized respondents according to dog population/control**

| **Dog population/control** | | Zones | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| North | West | | South | East | pooled |
| n | | | | | N |
| Question | Response | 10 | | 10 | 10 | 10 | 40 |
| Dog population control program | Yes | 1(10) | | 0(0) | 1(10) | 1(10) | 3(7.50) |
| No | 9(90) | | 10(100) | 9(90) | 9(90) | 37(92.50) |
| If yes ,mention methods (N=3) | Rabies awareness seminar | 1(10) | | 0(0) | 1(10) | 1(10) | 3(7.50) |
| Other options(Dog vaccination, Rabies awareness seminar, all) | | | | | | | |
| Any existing rabies control program in city | Yes | 1(10) | | 0(0) | 1(10) | 1(10) | 3(7.50) |
| No | 9(90) | | 10(100) | 9(90) | 9(90) | 37(92.50) |
| You report to authorities if there is suspected rabies outbreak in your city | Yes | 1(10) | | 0(0) | 1(10) | 1(10) | 3(7.50) |
| No | 9(90) | | 10(100) | 9(90) | 9(90) | 37(92.50) |

*Figures in parenthesis indicate percentage, n indicates sample size, “N” total sample size*

**Table 14. Cumulative knowledge score of dog population control program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| level | Zones | | | | Pooled |
| North | West | South | East |
| Poor | 27 | 30 | 27 | 27 | 111 |
| Fair | 1 | 0 | 1 | 1 | 3 |
| Good | 3 | 0 | 3 | 3 | 9 |
| **χ2** =4.289 , p=0.637 | | | | | |

*\*indicates significant difference at 5 % level of significance*

**Table 15. Cumulative knowledge score of rabies**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| level | Zones | | | | Pooled |
| North | West | South | East |
| Poor | 243 | 284 | 231 | 260 | 1018 |
| Fair | 51 | 50 | 46 | 50 | 197 |
| Good | 104 | 54 | 123 | 81 | 362 |
| **χ2** =35.76, p=0.001\* | | | | | |

*\*indicates significant difference at 5 % level of significance*