

# A Descriptive Study to Assess the Knowledge Regarding First Aid Management of Dog Bite

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## Abstract

**Background:** Dog bite is a painful, dangerous and threatening situation, which instills fear about the animal. A dog bite is a main source of rabies. There are myths and misconceptions about the disease and wound management. Practices like application of harmful substances like turmeric, lime and mud are the problems hindering rabies prevention and control. Proper steps need to be taken up to control the canine rabies. This present study was intended to assess the knowledge regarding first aid management of dog bite among college students.

**Materials and Methods:** A non experimental cross sectional survey design was adopted in this study. The study was conducted among 70 students of Sree Narayana College, Sreenivasapuram, Varkala. The objectives of the study were to assess the knowledge regarding first aid management of dog bite among college students and find out the association between the level of knowledge regarding first aid management of dog bite and selected socio-demographic variables. A semi-structured questionnaire was used to collect socio-demographic data and knowledge regarding first aid management of dog bite among college students.

**Result:** The data were analysed using descriptive and inferential statistics. The study revealed that among 70 students, 13 (19%) had poor knowledge, 57 (81%) had average knowledge and none of them have good knowledge regarding first aid management.

The study concluded that there were significant association between level of knowledge regarding first aid management of dog bite and religion, monthly family income.

**Keywords:** Knowledge, First aid management, Dog bite, College students

## INTRODUCTION

Rabies is well-known as one of the foremost fatal public health issues that cause around 59,000 human death per annum worldwide. Over 20,000 rabies-related human deaths have been estimated in the country, and children below 15 years of age are predominantly affected. Most of the victims belong to poor rural communities.<sup>1</sup> Poor public awareness towards rabies is considered as one of the bottlenecks for

the prevention and control of the disease in India. Understanding community, 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.<sup>2</sup>

When clinical signs and symptoms show, fatality rates become 100%. However, it is entirely remediable if victims treat with World Health Organization guided post-exposure prophylaxis (PEP), entailing vigorous washing of wound, instant rabies vaccination after probable exposure, and finally, in exceptional situations, rabies immunoglobulin.<sup>3</sup>

Education on dog behaviour and bite prevention for both children and adults is an essential extension of a rabies vaccination programme and can decrease both the incidence of human rabies and the financial burden of treating dog bites.<sup>4</sup> Despite the tremendous progress in the field of preventive medicine and vaccination, rabies is widely prevalent in India causing morbidity, mortality, emotional damage, loss of work day and cost for treatment.<sup>1</sup>

The key towards implementing effective rabies elimination programs is to engage with local communities, start small, catalyse long-term investment through stimulus packages, ensure the ownership of governments, demonstrate success and cost-effectiveness, and scale up quickly.<sup>4</sup>

WHO leads the collective “United Against Rabies” to drive progress towards “Zero human deaths from dog-mediated rabies by 2030.”<sup>4</sup>

## Background of the Problem

Dog bite is a painful, dangerous and threatening situation, which instills fear of the animal. The most significant problems associated with dog bites are infection and mechanical destruction of skin, muscles, tendons, blood vessels, and bones. The bite may cause simple laceration or be associated with crush injury, puncture wound, or tearing of multiple layers of the tissues. The severity of injury depends on animal size, victim size, and anatomic location of the bite. Dog bites usually occur on the extremities. However, facial bites are common in small children and are in severe form. Dog bites may involve significant tissue damage with deaths reported, usually in children. Dog bite is the main source of rabies. Infected animals may show symptoms such as lethargy, fever, vomiting, and anorexia.<sup>5</sup>

According to ‘The Times of India’ journal (22 August 2022), dog bite cases in Kerala increased by over 200% in the past 8 years. Between 2013 and 2021, dog bite cases increased from 62,280 to 2.2 lakhs. This data shows that in the last 9 years, over 13 lakh dog bite cases were reported in districts across the state.

Rabies is a viral zoonotic fatal infection of all warm-blooded animals which is characterized by acute encephalitis which is caused by rabies virus genus *Lyssavirus* in the family of *Rhabdoviridae* that causes various symptoms in humans like violent movements, uncontrolled excitement, inability to move body parts, confusion, loss of consciousness and hydrophobia. Rabies spread to people through close contact with infected saliva via bites or scratches. The main route of rabies transmission to human is the bite of rabid dogs.<sup>4</sup>

Human exposures to any form of dog bite whether lick/scratch with or without bleeding carries the risk of rabies and hence need of vaccination.<sup>6</sup> Every instance of dog bite should be treated as medical emergency. Prompt and adequate local treatment along with post-exposure prophylaxis is an effective way by which rabies can be prevented. Public Health Education programmes will be able to create awareness among the public regarding the danger of inadequately managed dog bite.

### Needs and significance of the study

The irony is that most death occurs due to ignorance about urgency of 'First-Aid management' of the wound after dog bite and lack of access to affordable and effective services in health sector.<sup>6</sup> There are many myths and false beliefs associated with wound management. These include application of oils, herbs, and turmeric on the wounds inflicted by rabid animals. More faith in indigenous medicines that are of unproven efficacy and not washing the wound properly because of fear that it would get infected.<sup>7</sup>

According to World Health Organization (WHO) report (8 September 2022), India reports the highest number of rabies death in the world. Every year around 18,000-20,000 people die which is about 36 percentage of the total deaths in the world. About 99 percent of rabies cases in humans are from dogs.<sup>4</sup>

A descriptive study conducted by C. G. Asha, Y. Saranya, Aleena Wilson, Bringle, Alphons Biju, Mariyanna Varghese, et.al (Department of Medical Surgical Nursing, Aswini College of Nursing, Thrissur, Kerala) on February 2022 to assess the level of knowledge regarding first aid management of dog bite among general population at the selected community. 50 samples were selected by convenience sampling technique. The analysis of the study insisted that in the general population; 2% (1) were having an adequate level of knowledge, 68% (34) of them were having moderate knowledge, and 30% (15) were having poor knowledge. The study concluded that knowledge regarding dog bite is poor.<sup>8</sup>

A cross sectional study was conducted by Dr Shaliet Rose Sebastian on 2018 in Trivandrum, Kerala among the high school children to assess the knowledge regarding rabies. The results show that although all the study participants have heard about rabies, only 70 out of 200, that is 35% students knew that dog bite may leads to rabies.<sup>9</sup>

Prompt and adequate local treatment along with post-exposure prophylaxis is an effective way by which rabies can be prevented. Thus, a person should learn basic first aid knowledge. It is said to note that in most developing countries like India, a lot of people are still unaware of doing basic life-saving procedures.

With regards to above data, it is inevitable to take necessary measures to make students aware of first aid management of dog bites and rabies

### Review of Literature

Literature reviews for the study were categories under the following headings.

1. Literature related to dog bite and its consequences.
2. Literature related to knowledge regarding first aid management of dog bite.
3. Literature related to knowledge regarding prevention of dog bite.

### Literature related to dog bite and its consequences.

A descriptive study conducted by Pradnya Waghmare et al. (2021) on 'Assessment of knowledge regarding dog bite' among adults residing in selected rural area of Turkabad, Kharadi, Aurangabad. Survey approach with descriptive research design was used in this study. 500 adults were selected by using random sampling technique for the study. The results showed that (4%) had a poor level of knowledge, (38%) had an average level of knowledge, (51.2%) possessed good knowledge, and (6.8%) were having very good knowledge scores.<sup>10</sup>

A cross sectional study was conducted by Maneesha Godbole, Anjana Ramachandra Joshi, Dattatraya D. Bant (2019) on 'the knowledge and response to dog bite' among the urban and rural

population of Hubballi taluk. A total 120 households of the urban and rural localities were interviewed with a semi-structured pretested questionnaire. Descriptive statistics such as frequencies and percentage were used. Data analysis was performed using the chi square test and Fisher exact test. The result shows that 89.16% of the study population was aware that the disease could be prevented by vaccination. 35% of the rural and 28% of the urban population believed that the disease could spread from person to person. The knowledge and practice about the rabies prevention and management among study population were poor. The harmful treatment practices for bite sites were still prevalent among both rural (25%) and urban (8.3%) population. The study concludes that the knowledge about the dog bite management and Rabies prevention is insufficient among both populations.<sup>11</sup>

A cross-sectional community based study conducted by S Sharma et al. (2016) on 'Prevalence of Dog Bites in Rural and Urban Slums of Delhi'. Total 500 households covering a population of 2887 individuals were included in the study, the families were selected by systematic random sampling. A pretested and a prevalidated questionnaire was used. Chi-square test was applied for comparing proportions related to the categorical variables and t-test was used for comparing means. The results show that dog bite incidence rate for the study population for the last year was 25.2/1000 population with higher rates in urban (30.1/1000) than rural (19.6/1000) slum. Two-fifths of the dog bite patients did not wash the wound with soap and water. The practice of washing the wound with soap and water was significantly higher in urban than rural slums. One-fifth of the patients did not receive the anti-rabies vaccine. A majority (79.0%) of the patients did not receive anti-rabies serum. The study concluded that a high prevalence of dog bites coupled with poor knowledge and dog bite management practices is a worrisome trend which policy makers should take into account to make India rabies-free.<sup>12</sup>

A cross sectional study was conducted by Arjunkumar Hardas Jakasania et al. (2017) on 'An association of knowledge and misconceptions with health seeking behaviour for dog bite' among teachers of the primary schools in Ahmedabad city. 196 teachers were selected randomly and written consent from each teacher was taken. A pre-tested and pre-designed questionnaire was used to collect data on knowledge & attitude regarding dogbites. Analysis was done by Chi-square. The result shows that out of 196 teachers, 118 teachers has not taken ARV injection after bite of a normal-looking dog. Many of them have misconceptions about ARV injection. 128 teachers discontinued ARV after a dog bite when symptoms of rabies have not appeared within 10 days of starting ARV. There was an association found between knowledge regarding rabies and treatment-seeking behaviour which was found statistically significant. The study concluded that there is a serious gap in knowledge regarding rabies in primary school teachers and misconceptions regarding rabies are rampant in most of them.<sup>13</sup>

A cross-section study conducted by Anita Khokhar; G.S.Meena, et al. (2003) on 'profile of dog bite cases attending M.C.D Dispensary at Alipur, Delhi'. The study included 313 dog bite cases who attended the dispensary to receive anti-rabies post-exposure immunization. The chi square test was used for analysis. The study showed that in cases of dog bites, 69.9% were males. 53.9% of the cases were accounted for by those less than 15 years of age. 82.75% of the victims suffered from class III exposures. Extremities were involved in the majority (88.17%). Most of the dog bite cases were unprovoked. Children less than 15 years of age were more likely to provoke a dog ( $p < 0.05$ ). A maximum of 27.79% of the bites occurred during May-June. 73.80% were bitten by a stray dog. Only 31.03% of the victims reported for treatment within 24 hours. 85.62% had applied chilly paste on the wound. Half of the subjects mentioned that a person could go mad after being bitten by a dog. 68.05% did nothing to control freely roaming dogs that had bitten. Only 2 subjects had reported the matter to the concerned authority.<sup>14</sup>

A cross-sectional hospital-based study was conducted by Amit Ganasva, Bhaveshbhai Bariya, et al. (2015) on 'Perceptions and treatment seeking behaviour of dog bite patients attending regional tertiary care hospital of central Gujarat, India.' The study included animal bite victims who had attended Anti Rabies Clinic from February to May in the year 2012. All enrolled patients were interviewed using a pretested semi-structured questionnaire. The study showed that the majority of the patients (45.6%) in the study were more than 50 years of age. Almost three-fourths of the study population were males (71.7%). One-third of the population had primary education while 14.2% of the patients were illiterate. Most of the patients (64.1%) lived within 10 kilometres distance from ARV Clinic. Among those, 37.6% patients who had applied nothing on the wound site, while only 11% of them had washed the wound with soap and water. 93.9% (385) approached other health facilities before coming to the ARV Clinic, of which no treatment/care was given in 18.8% of the cases. The study concluded that neither the bite victims did not take proper wound care nor took prompt actions to reach the health facility after the bite. And also indigenous methods for wound care were quite prevalent.<sup>15</sup>

A cross-sectional study conducted by Sukumar Bharathy, L.Gunaseelan (2017) on 'Understanding demographics of dog bite victims attending anti-rabies ward' in Chennai city, India. A total of 256 victims of dog bites from different areas of Chennai were interviewed with a pre-tested structured questionnaire after informed verbal consent from victims. The results show that out of the victims of dog bites, the majority were males (71.87%) in the age group of 11 to 20 years (21.49%). While 46% of victims were bitten by stray dogs, and most of the wounds were found in the lower portion of the body (59.77%). Fifty one percentage of the bite victims washed their wounds and 48.44 % attended anti-rabies ward within 24 hours for post- exposure prophylaxis. The study concluded that there is an urgent need to focus on educational campaigns throughout Chennai with effective dog population management combined with a strategic immunization programme and the effective use of rabies RIG and vaccination in dog bite cases as warranted could help to reduce rabies death.<sup>16</sup>

### **Literature related to knowledge regarding first aid management of dog bite.**

A study conducted by Mrs.Sunita.R.Chavan et.al (2019) on 'the knowledge regarding first aid management of dog bite and preventive measures of rabies' among higher secondary school students, in Pune. The study was carried out on 200 samples. A self-structured questionnaire was used for data collection. About 3.50% of students had poor knowledge, 44.50% of students had less knowledge, 40.50% of students had average knowledge, 11.50% of students had good knowledge regarding first aid management of dog bite and preventive measures of rabies.<sup>1</sup>

A cross-sectional study was conducted by Dr. Y. Suba Joice, Dr. Zile Singh, Dr. Shib Sekhar Datta (May 2011) on 'Knowledge, Attitude and Practices Regarding Dog Bite and its Management among adults in rural Tamil Nadu'. The study was conducted among 275 households using multistage random sampling method. Proportions were calculated for all qualitative variables. The chi-square test was used for the association between selected socio-demographic variables and KAP regarding dog bites. The study shows that out of 275 study respondents, only 6.9% knew microorganism as the cause of rabies but 86.2% of the respondents knew rabies is spread by dogs. 90.5% and 59.3% knew that a vaccine for rabies is available and the site of administration was the abdomen, respectively. 73.8% felt it essential to wash the bite site with soap and water. Only 49.4% practised deep burial as the method of disposal of a suspected rabid dog.

The study concluded that knowledge, attitude and practices concerning the prevention and treatment of rabies were not found adequate among the rural population.<sup>18</sup>

A cross-sectional study was conducted by Smita. S. Valekar, Maya Vikas Kshirsagar (2014) on 'awareness regarding dog bite and its management among rural communities of Maharashtra'. All individuals above the age of 18 years were included in the study. The study was conducted with the help of a pre-tested, semi-structured questionnaire for one month and people attending RHTC OPD were included in the study. A total of 144 participants were included in the study, 75 (52%) were females. Out of these 111 (77%) were aware about dog bite causes disease and among these 52 (46.8%) were aware that dog bite causes rabies. Among the participants, 138 (95.8%) were aware of the vaccine availability and 125 (90.5%) knew the vaccine is available in Government Hospitals. In the study 88% of dog bite victims received treatment. The study concluded that there is a lack of awareness regarding dog bites and its management among the rural population.<sup>19</sup>

A cross-sectional study was conducted by Anuj Singh, Medhavi Agarwal (2018) on 'Knowledge about first aid, wound management and vaccination for the cases of dog bite' among the students of a Management and Technology Institute in Western Uttar Pradesh. The study included 200 students. Chi-square test was used for statistical interpretation of results. The results show that 96% believe in proper wound management of animal bites, 37% think dressing of the wound is necessary, 40% think immediate suturing of wound is important, whereas 90% of study subjects were aware of anti-rabies vaccine. The study concluded that awareness assessment about wound management is almost satisfactory. Since the majority of study subjects know the right measure of first-aid and believe in proper wound management after a dog bite along with the knowledge about anti-rabies vaccine.<sup>20</sup>

A cross-sectional study conducted by Hemagiri et al. on 'An epidemiological study on dog bite and its management in Bellary, Karnataka' among children who were dog bite victims attending VIMS hospital, from Feb 2011 to Nov 2011. Out of 536 participants, 71% were males. 35% of the participants belong to 10-12 years. 42% of children were bitten over lower limbs and 43.8% of the victims had some local treatment immediately. 77% of the victims received the anti-rabies vaccine and only 11% of the dogs were vaccinated against rabies.<sup>21</sup>

A cross-sectional study conducted by Abhishek Singh, Anu Bhardwaj, et al. (2013) on 'knowledge, attitude and practice of general practitioners regarding dog bite management' in Northern India. The study was carried out in the private and public clinics of Ambala city from January to April 2012 using a pre-tested self-administered questionnaire. The study population composed of 100 GPs comprising 45 MBBS or above degree holders (Group 1) and 55 other GPs like BAMS, RMPs, etc (Group 2). Interpretation of data was done using percentages and proportions. The  $\chi^2$  -Test was used to test the statistical difference in the knowledge between the two groups. The result shows that out of the total, 68% and 29% of respondents in Group 1 and Group 2, respectively, were correctly told that wounds must be washed with soap and water for a minimum period of 15 minutes. A total of 71% and 11% of respondents in Group 1 and Group 2, respectively, could correctly answer about the target groups for pre-exposure prophylaxis. A total of 62% of GPs did not know the high-risk groups to whom pre-exposure prophylaxis has to be given. The study concluded that there was an apparent lack of awareness among the GPs regarding appropriate animal wound management and vaccine administration. Reorientation programs and continued medical education for GPs are required to highlight the WHO guidelines regarding the treatment and animal bites.<sup>22</sup>

### Literature related to knowledge regarding the prevention of dog bite.

A descriptive study was conducted by P Chitra, Bindhiya B Nair (2016) on ‘awareness regarding management and preventive measures of dog bite’ among parents in selected wards of Nayarambalam Panchayat, Ernakulam. The study was conducted among 100 parents of children aged 4 to 14 years residing at Nayarambalam. The study shows that none of the parents exhibits adequate knowledge of dog behaviour towards the child, 56% are unaware about the dog behaviours, 44% had average knowledge. Nearly 47% of the subjects had inadequate knowledge regarding the management of dog bites and 41% had inadequate knowledge regarding the prevention of dog bites. Even though the incidence of dog bites is tremendously increasing in the country, awareness regarding child behaviours towards dog among parents was found to be poor, only 10% had adequate knowledge, 58% had average knowledge, 32% had inadequate knowledge. Regarding the misbeliefs related to dog bites, 41% of the subjects had misbeliefs related to dog bites. The study finding revealed the fact that most dog bites incidents occur because, children are unaware of the dog’s behaviour and is not taught by parents or school how to behave or avoid such a situation.<sup>23</sup>

A study was conducted to evaluate the effectiveness of an information booklet on ‘knowledge regarding management of dog bite among the rural population, Karad’ in 2020, conducted by Stephen et al. A pre-experimental study design was used. Sample size is 100; simple random sampling technique is used and concluded that though subjects know about rabies transmission and post-exposure prophylaxis, a well-planned awareness program must be strengthened to increase the vaccination after a dog bites and the type of first aid, the severity of the bite, thorough wound washing for 10–15 min with soap and water immediately after dog bite, administration of tetanus toxoid, vaccine awareness, immediate active immunization by consulting physician, not closing the dog bite wound, and need of regular immunization is important.<sup>24</sup>

A cross-sectional study conducted by Vandana Arjun Kakrani, Sumit Jethani et al. (2013) on ‘Awareness about dog bite management in rural population’ of Alandi, Pune. The study was carried out at a rural health training centre. The patients attending the daily OPD were interviewed on a pretested questionnaire over a period of 1 month. The result shows that out of the 300 respondents majority were in the age group of 26-35 years (39.70% males and 45.10% females). Only 112 (37.30%) were aware that the dog should be watched for 10 days after dog bite, even in the areas where stray dog menace was present. A crucial knowledge about severity of bites revealed that 238 (79.30%) knew that a deep wound at any site is considered as severe bite. Less than 10% knew that bites on the head, face or fingers were also severe bites. The study concluded that large knowledge gap about various parameters of dog bite management in rural population need to be addressed by well-planned extensive health education programme.<sup>25</sup>

A descriptive study conducted by Vandna Pandey, Nancy Kurien, et al. (2021) on ‘assess the knowledge regarding rabies prevention among the general population of the community residing at Pratap Nagar, Jodhpur, Rajasthan’. A quantitative research approach was used. Data was collected through a self-structured interview schedule. Sixty samples were selected by non-probability convenient sampling technique. The result shows that out of 60 subjects in which male were 28 and female were 32. Among those 31 subjects had good knowledge, 17 subjects had average knowledge and 2 subjects had poor knowledge. No personal variable was found to be in association with level of knowledge at  $p < 0.05$  level of significance. The study concluded that awareness session on rabies prevention should be held regularly

to improve the knowledge and create a positive attitude and remove the misconception among general population.<sup>26</sup>

A cross-sectional study was conducted by Radha Madhab Tripathy, Sushree Priyadarsini Satapathy, et al. (2017) on 'assessment of knowledge, attitude and practice regarding rabies and its prevention' among construction workers in Berhampur, Odisha. The study was done on the campus of MKCG medical college. Data was collected by using pre-designed interview questions from 400 construction workers. Descriptive statistics and chi square test were applied using SPSS 17 KAP score were calculated in which  $P < 0.05$  was considered statistically significant. The results shows that the mean age group of study participants was  $37.75 \pm 15.8$ , 72.5% were male and 27.5% were female. 84% of the participants had heard the word rabies. 65.75% among them had poor KAP scores. The study concluded that construction workers had poor knowledge about animal bites and rabies. Their knowledge, attitude and practice concerning the prevention and treatment of rabies can be improved by providing proper health education.<sup>27</sup>

### Research Methodology

This Nonexperimental descriptive cross sectional survey was carried out on the students of Sree Narayana College, Sreenivasapuram, Varkala, Thiruvananthapuram, Kerala. A total 70 students ( both male and female) in the age group of 18 to 20 years were for in this study.

**Research Design:** Non-experimental descriptive cross-sectional survey design is used.

**Setting of the Study:** This study was conducted at Sree Narayana College, Sreenivasapuram, Varkala.

**Sample:** The sample consists of 70 students of first-year BA Economics at Sree Narayana College, Sreenivasapuram, Varkala.

**Sampling method:** The study population was drawn conveniently from Sree Narayana College Varkala

### Sampling Criteria

- ❖ Inclusion Criteria
  - Students who are willing to participate.
- ❖ Exclusion Criteria
  - Students who are not interested and absent on the day of data collection.
  - Students who have participated in any program regarding first aid management of dog bite.

### Tool / Instrument

The tool used for the study is a semi-structured questionnaire and is mainly divided into two sections.

Section A: Socio-demographic data

It includes socio-demographic data for obtaining sample characteristics such as age-in-years, gender, religion, area of residence, monthly income of the family, family history of dog bites and nearby medical care facility.



Section B: The questionnaire consists of 30 items to assess the knowledge regarding dog bite. Each question carries one mark.

### Scoring

0-10 Poor Knowledge

11-20 Average Knowledge

21-30 Adequate Knowledge

### Validity

In this study, a semi-structured questionnaire was used for data collection. The content validity of the tool was carried out by various subject experts and the tool was modified to the final form.

### Data collection process

The researchers obtained formal permission from the Principal of Sree Narayana College, Sreenivasapuram, Varkala. The data were collected on 21 February 2023. The study includes 70 students of first-year BA Economics at Sree Narayana College, Sreenivasapuram, Varkala. The investigators introduced themselves to the subjects and explained the objectives of the study to each subject. Confidentiality was ensured and informed consent was obtained from selected samples. The data were collected by using a semi-structured questionnaire. The data collection process was concluded by thanking the subjects for their participation.

### Ethical consideration

Ethical clearance was obtained from the institutional ethical committee of Sivagiri Sree Narayana Medical Mission College of Nursing, Sreenivasapuram, Varkala. Informed consent from each student in the study was obtained before the study. The samples were informed that they could withdraw from the study at any point in time.

### Plan for data analysis

The data collected were grouped and analyzed by using descriptive and inferential statistics. Frequency distribution and percentage were used for analyzing socio-demographic variables and chi-square test was used to find out the association between the knowledge regarding first aid management of dog bite and selected socio-demographic variables.

### Results

The finding of the result reveals that majority (67%) of students were 18 years old, 23% of students were 19 years old and 10% of students were 20 years old. More than half (73%) of the students were females and 27% of students were males. Most (91%) of the students were Hindus and 9% of students were Muslims. More than half (93%) of the students were from rural area and 7% of students were from urban area. 47% of students had family income <5000, 31% of students had family income between 5001-10000, 9% of students had family income between 10001-20000 and 13% of students had family income >20000. The majority (54%) of students do not have family history of dog bites, 27% of students had family history of dog bites and 19% of students do not know about that. More than half (90%) of students had government medical care nearby and 10% of

students had private medical care nearby.

The majority (81%) of students had average knowledge, 19% of students had poor knowledge and none of them have good knowledge and there is a significant association between the level of knowledge and area of residence of students and monthly family income

**Table (1): Level of knowledge regarding first aid management of dog bite among students**

Knowledge	f	%
Poor	13	19
Average	57	81

**Table (2): Association between the level of knowledge regarding first aid management of dog bite among students and selected demographic variables**

Sample characteristics	Poor		Average		df	$\chi^2$
	f	%	f	%		
<b>Age in years</b>						
18	8	17	40	8	2	0.564
19	4	25	12	3		
20	1	17	5	7		
				5		
				8		
				3		
<b>Gender</b>						
Male	1	5	18	9	1	3.591
Female	12	24	39	5		
				7		
				6		
<b>Religion</b>						
Hindu	10	16	54	8	1	4.285
Muslim	3	50	3	4		
				5		
				0		
<b>Area of residence</b>						
Rural	12	18	53	8	1	0.0731
Urban	1	20	4	2		
				8		
				0		*

<b>Monthly income</b>						
<5000	5	15	28	8	3	11.886
5001 - 10000	1	5	21	5		*
10001 - 20000	4	67	2	9		
>20000	3	33	6	5		
				3		
				3		
				6		
				7		
<b>Previous history of dog bite</b>						
Yes	4	21	15	7	2	0.56
No	7	14	44	9		
				8		
				6		

### Discussion

The present study focused to compare and assess the knowledge regarding first aid management of dog bite among college students. The major findings of the present study are discussed in relation to the findings of other research studies.

The first objective of the study was to assess the level of knowledge regarding first aid management of dog bite among college students and the study revealed that 81% of students had average knowledge, 19% of students had poor knowledge and none of them have good knowledge. The findings of the present study were supported by a study conducted by Renuka to describe the knowledge of people (21-40 years) regarding dog bite and the prevention of rabies residing in selected community area, Dist Ludhiana, Punjab. The study findings showed that 73.33% had average knowledge, 18.33% had poor knowledge. The study concluded that knowledge score of people regarding dog bites and the prevention of rabies was average.<sup>18</sup>

The second objective of the study was to find out the association between the level of knowledge of students and socio-demographic data. The study revealed that there was significant association between the level of knowledge in relation with religion and monthly family income. The findings of the present study were supported by a study conducted by Pradnya Waghmare, C. Supriya on assessment of knowledge regarding dog bite among adults residing in selected rural areas of Turkabad, Kharadi, Aurangabad. The study revealed that religion and monthly income of family had significant association with level of knowledge<sup>10</sup>.

### Conclusion

Based on the findings of the present study following conclusions were derived; It was found that majority (81%) of students had average knowledge, 19% of students had poor knowledge and none of them have good knowledge.

It was also revealed that there was significant association of level of knowledge in relation with religion and monthly family income.

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