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Assessment of Knowledge, Attitude and Practice Towards Dengue Among the Selected Areas of Kalaburagi City

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ABSTRACT

Dengue fever is a viral disease that is occurred due to mosquito which is a one among huge global health issue as it is spreading all over the world rapidly. Every year, September and November are the months that shows peak incidence and annual outbreaks are reported in these months. Considering the year 2014, there are more than ten thousand dengue cases reported in India that has been double to the following year. A total of 600 individuals were enrolled into the study, out of which 586 people completed the study of which 239 i.e. 40.78% were male and 347 i.e. 59.21% were female. The remaining 14 individuals did not turn up of for follow up and were under dropouts. The data of those who completed the study was analyzed. A total of 586 people were included in the study, who were divided randomly into test and control group. Out of 586 people 293 were in test group and 293 were concluded as control group. In test group out of 293 people 121 i.e. 41.29% were males and 172 i.e. 58.70% were females. In control group out of 293 people, 118 i.e. 40.27% were males and 175 i.e. 59.72% were females. In present study a total number of 586 people were enrolled in the study. The total population was randomly divided into test and control groups. 293 subjects were included in test group whereas 293 subjects were included in control group. We have provided counseling in their respective language with patient information leaflet(PIL) and the results revealed that counseling by pharmacist rely helped in understanding the disease, medications and preventive measures. The result revealed that there is increase in KAP scores of the dengue due to the intervention made by pharmacist. Hence pharmacist plays an important role in community set-up by educating the people regarding dengue and controlling the forthcoming complications of the diseases.

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INTRODUCTION

Dengue fever is a viral disease that is occurred due to mosquito which is a one among huge global health issue as it is spreading all over the world rapidly. Every year, September and November are the months that shows peak incidence and annual outbreaks are reported in these months. Considering the year 2014, there are more than ten thousand dengue cases reported in India that has been double to the following year. The best possible way to get out of this issue is to provide vector control

programmes to control the spread of *Aedes aegypti* and *Aedes albopictus* to the other areas [1]. Health education programs to provide awareness regarding dengue to enhance knowledge about the disease organisms, attitude towards the disease and the preventive measures to reduce the spread of dengue. It is also important to have prior evident knowledge about the treatment practice to reduce the complications [2]. In the current study, we determined the knowledge, attitude and practice towards dengue among the selected areas of Kalaburagi city via validated questionnaire.

According to WHO, incidence rate of dengue has increased to 34% in past 50 years. Annually, it is estimated that there are occurrence of around 50-100 million dengue cases. South East Asia accounts around 52% of global risk and one of the highest risk regions of Dengue fever [1]. As estimated that Asia bears around 70% of global dengue burden, a figure to which India alone is calculated to contribute 34%. Approximately, two thirds of the global population that is exposed to dengue resides in the Asia-Pacific region. Of which, around 1.3 billion people live in ten dengue-endemic countries of Southeast Asia where dengue is one of the most common causes of hospitalization and fatalities. In Karnataka various government hospitals across state has recorded 2193 positive dengue cases in the past 7 months according to BBMP records, private hospitals in the city have seen 1389 confirmed cases of dengue [2].

The huge rise in human population, lack of awareness among public, environmental and social changes, and enhanced breeding of vector mosquitoes resulted in increased dengue transmission. Water storage drums, cement tanks, flower vases, plastic and metal drums, tyres, tins, cans, bottles, coconut shells and other such damaged or waste containers that holds rain water, overhead tanks, ground water storage tank, etc, are the source of breeding of *Aedes* mosquitos [3].

As there is no vaccine, vector control is one of the ideal way to prevent dengue. Vector controlling methods may be successful, only if there is public participation, and for the success of a community-based programme it is important to assess and analyse the community perception regarding the disease, its mode of transmission and breeding sites [4]. Knowledge, awareness and practice studies serve as an educational diagnosis of a population. Face-face interview based on a questionnaire developed by investigator which comprised of 26 questions, and was divided into four sections which included: (a) socio- demographic profile (b) knowledge and awareness about the dengue (c) prac-

tice related to prevention against disease (d) surrounding observations [5]. At the end of the interview each respondent was provided a hand-out with information relating to dengue fever [6].

Population have lack of knowledge regarding dengue and its preventive methods. They require huge understanding of dengue fever, it is important to make urban and rural people aware of different preventive practices and reduce knowledge application gap [7]. There is a need to provide information, educate and communicate people to combat problems associated with this disease. The usual habit of storing water in inappropriate manner leads to breeding of *Aedes* mosquitoes-vector of dengue [8]. Furthermore, rainfall leads to artificial collection of water in discarded coconut shells, tiers and other materials. Dengue control can be seen only if the public has awareness on dengue symptoms, transmission and control strategies [9].

Therefore, the aim of the present study is to assess the Knowledge, Attitude and Practice regarding dengue fever among patients. As it is a major public health problem all over the world, it can be controlled and handled with active participation of the community pharmacist, there is a need to organize health education and awareness programs about dengue disease, to increase community knowledge and encourage the community to participate in integrated vector control programs [10, 11].

Aim and Objectives

1. To assess the knowledge, Attitude and Practice towards dengue among selected areas of Kalaburagi city.
2. To assess the socio-demographic details of people in selected areas.
3. To carry out patient counselling for dengue infected patients.

METHODOLOGY

Study Site

This study was conducted at the selected areas of Kalaburagi city, Karnataka.

Study Design

A prospective observational study.

Sample Size

A total of 600 individuals who fulfilled the inclusion and exclusion criteria were selected for the study. Out of which 586 people completed the study and remaining 14 individuals did not turn up for follow up and were under dropouts.

Study Duration

The study is conducted over a period of 6 months from September 2017 to March 2018.

Study Criteria

The study is carried out by considering the following inclusion and exclusion criteria after taking consent from the people involved in the study in a suitably designed informed consent form in their regional/understandable language.

Inclusion Criteria

1. People who are affected from dengue
2. People suffering from dengue along with other co-morbid conditions
3. Age limit of above 18 years.
4. Residents of Kalaburagi city.
5. People of either sex.
6. People who are willing to participate in the study.

Exclusion Criteria

1. Doctors and pharmacists.
2. Medical students and other health care professionals.
3. Person who is not interested to participate in the study.
4. People who have impaired senses.

Source of Data

Data was collected directly by visiting door-to-door houses which were randomly chosen in the study. The required information was received thereby.

Study Procedure

A community based prospective and observational study was carried out in the selected areas of Kalabuagi city among 586 respondents. The houses were selected randomly and marked accordingly. The study was initiated after obtaining ethical clearance. The people were enrolled into the study by considering the study criteria after taking their written consent to participate into the study. The study procedure was explained to the study population that involved door to door home visits.

Statistical Analysis

Standard statistics were used to describe patient demographics. Mean and standard deviation were

calculated for assessing knowledge, attitude and practice using KAP score in both test and control groups before and after intervention. The Statistical significance was tested using T-test and p values.

RESULTS AND DISCUSSION

A total of 600 individuals were enrolled into the study, out of which 586 people completed the study of which 239 i.e. 40.78% were male and 347 i.e. 59.21% were female as mentioned in Table 1 and Figure 1. The remaining 14 individuals did not turn up of for follow up and were under dropouts. The data of those who completed the study was analyzed and represented in Table 1.

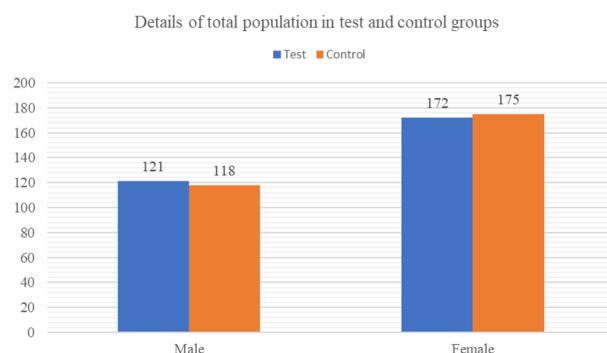


Figure 1: Details of Total Population in Test and Control Groups

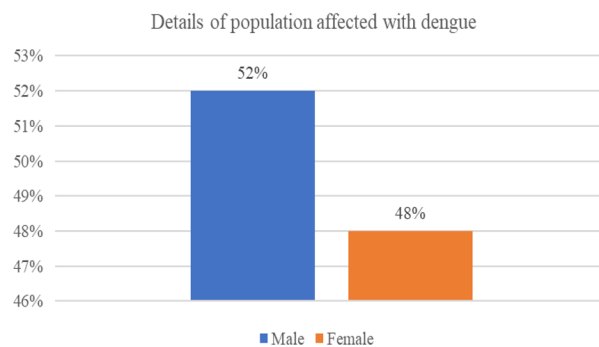


Figure 2: Details of Population Affected with Dengue

A total of 586 people were included in the study, which were divided randomly into test and control group. Details of total population in test and control groups are as shown in Figure 1. And the details of population affected with dengue were depicted in Figure 2.

Among 586 people enrolled in the study, age wise distribution of the people showed that 71 (12.11%) were in the age group of 18-25 years, 143 (24.40%) were in the age group of 26-35 years, 150 (25.59%) were in the age group of 36-45 years, 138 (23.54%) were in the age group of 46-55 years, 58 (9.89%)

Table 1: Details of Population Enrolled in Study

Gender	Total Population	No. of Dropouts	Population enrolled in study	Percentage of population
Male	244	5	239	40.78%
Female	356	9	347	59.21%
Total	600	14	586	100%

Table 2: Details of Demographics of the Total Population

Demographics	Total No. of Population	Percentage
Educational status of the subjects		
Illiterate	71	12.11%
Primary	67	11.43%
High School	192	32.76%
Intermediate	118	20.13%
Graduate	134	22.86%
Post Graduate	4	0.68%
Socioeconomic status		
Upper Class	26	4.43%
Upper Middle	342	58.36%
Lower Middle	190	32.42%
Upper Lower	22	3.75%
Lower class	6	1.02%
Habits		
No Habits	258	44.02%
Alcoholic	45	7.67%
Ex Alcoholic	40	6.82%
Smoking	86	14.67%
Ex-smoker	45	7.67%
Tobacco chewer	50	8.53%
Ex-tobacco chewer	62	10.58%

Table 3: Details of KAP Assessment Score Before and After Intervention

Assessment	Group	Pre-Intervention (mean \pm SD)	Post- Intervention (mean \pm SD)	T- Value	Significance
Knowledge	Test Group N = 293	114.92 \pm 62.69	176.23 \pm 74.79	2.26	P = 0.016 Significant
	Control Group N = 293	96.15 \pm 60.44	147.53 \pm 75.82	1.91	P = 0.034 Significant
Attitude	Test Group N = 293	118.87 \pm 59.87	181.25 \pm 45.60	2.46	P = 0.013 Significant
	Control Group N = 293	88.25 \pm 46.49	145.5 \pm 46.48	2.34	P = 0.017 Significant
Practice	Test Group N = 293	136.77 \pm 89.65	212.44 \pm 84.71	2.00	P = 0.031 Significant
	Control Group N = 293	113.77 \pm 78.56	187.22 \pm 77.07	1.84	P = 0.042 Significant

Table 4: Pre and post intervention total KAP score in both groups

Group	Pre- Intervention (mean \pm SD)	Post- Intervention (mean \pm SD)	T- Value	Significance
Test Group N = 293	122.53 \pm 69.29	188.43 \pm 71.10	3.63	P = 0.00029 Highly Significant
Control Group N = 293	99.33 \pm 61.96	158.9 \pm 69.96	3.29	P = 0.00083 Highly Significant

were in the age group of 56-65 years, 26 (4.43%) were in the age group of 66-75 years. Details of Demographics of the total population were represented in Table 2. Details of KAP Assessment score before and after intervention were represented in Table 3.

Knowledge Assessment Score

The mean score of test group and control group before intervention is 114.92 and 96.15 respectively. The standard score of test and control group before intervention is 62.69 and 60.44 respectively. The mean score of test group and control group after intervention is improved to 176.23 and 147.53 respectively. The standard score of test and control group after intervention is improved to 74.79 and 75.82 respectively. It is found that 't' value is 2.26 and 1.91, 'p' value of 0.016 and 0.034 in test and control groups respectively that shows it is statistically significant.

Attitude Assessment Score

The mean score of test group and control group before intervention is 118.87 and 88.25 respectively. The standard score of test and control group before intervention is 59.87 and 46.49 respectively. The mean score of test group and control group after intervention is improved to 181.25 and 145.5 respectively. The standard score of test and control group after intervention is improved to 45.60 and 46.48 respectively. It is found that 't' value is 2.46 and 2.34, 'p' value of 0.013 and 0.017 in test and control groups respectively that shows it is statistically significant.

Practice Assessment Score

The mean score of test group and control group before intervention is 136.77 and 113.77 respectively. The standard score of test and control group before intervention is 89.65 and 78.56 respectively. The mean score of test group and control group after intervention is improved to 212.44 and 187.22 respectively. The standard score of test and control group after intervention is improved to 84.71 and 77.07 respectively. It is found that 't' value is 2.00 and 1.84, 'p' value of 0.031 and 0.042 in test and control groups respectively that shows it is statistically

significant.

The mean score & standard score of test group and control group before intervention after intervention is improved. It is found that 't' value is 3.63 and 3.29, 'p' value of 0.00029 and 0.00083 in test and control groups respectively that shows it is statistically significant as shown in Table 4. Our results were similar to the study carried out by Bhanu Vaishnavi G, et al. 2015 [10].

CONCLUSION

Dengue is an endemic disease that is spreading at rapid pace in many parts of the world especially in South Asia and that in our country, as the disease has strong epidemic rise in our country. Further due to poor literacy rates, over economy and various other reasons there are inadequate reasons for patients to get information about the disease. Pharmacists play important role in helping the patients to gain knowledge about dengue. In present study a total number of 586 people were enrolled in the study. The total population was randomly divided into test and control groups. 293 subjects were included in test group whereas 293 subjects were included in control group. Pre-intervention study was carried out by providing PIL's, questionnaires and patient counseling for test group were as control group were aided with only PIL's and questionnaires. Knowledge of subjects in both the groups were assessed by using questionnaires. We have provided counseling in their respective language with patient information leaflet(PIL) and the results revealed that counseling by pharmacist rely helped in understanding the disease, medications and preventive measures, this study also emphasizes the potential of pharmacists to play an important role as patient counselor in management of dengue. The study was conducted in Aayarwadi (181), Gunj (180), Shivaji nagar (225) in kalaburagi city. There after a particular period gap of 1 month we conducted a follow up to assess the effect of our counseling there we found that there was an increase in Knowledge, Attitude, Practice of subjects regarding dengue both in test and control groups but there is more increase

in test group i.e.122.53 pre-intervention and 99.33 post-intervention. The result revealed that there is increase in KAP scores of the dengue due to the intervention made by pharmacist. Hence pharmacist plays an important role in community set-up by educating the people regarding dengue and controlling the forthcoming complications of the diseases. Our work and results prove that the pharmacist is an important source of knowledge by which people are benefited both community level.

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Conflict of Interest

The authors declare that there is no conflict of interest.

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