

# Preventive Measures against Dengue Fever in Medical Students of Quaid E Azam Medical College Bwp

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## ABSTRACT

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### Introduction:

Today, Dengue fever (DF) is the most important mosquito borne viral disease around

the globe According to The World Health Organization (WHO) , 40% of world's population is at risk of dengue virus transmission. Pakistan met with a DF epidemic

in 2011. Considering the unavailability of vaccine or any kind of chemoprophylaxis, implementation of preventive measures is the most effective approach to curbing the spread of disease. Hence, the primary aim of this study was to analyse the knowledge and practice of preventive measures against DF in medical students of Q.A.M.C, Bwp.

### Objectives:

The objectives of the study were to determine the knowledge and practice of preventive measures against dengue fever (DF) in Medical Students of Quaid-e -Azam Medical College

Bahawatpur (Q.A.M.C Bwp).

### Study

Cross Sectional Descriptive Study

### Setting

### Design:

:

The study was carried out at Q.A.M .C Bwp.

### Duration:

The duration of study was from 31<sup>st</sup> May 2012 to July 2012.

### Subjects and Methods:

Two Hundred and Forty Five willing M.B.B.5 Students studying in Q . A .M .C Bwp were

included in the study. A predesigned questionnaire was used to collect data .

### Results:

Our study revealed that the knowledge of preventive measures against OF was excellent in 22.07% of our study population, good in 44.61%, satisfactory in 19.37%, insufficient in 11.03% and poor in 2.92%.

The practice of preventive measures against DF was found to be excellent in 9.31% of our study population, good in 35.64%, satisfactory in 26.54%, insufficient in 13.11% and poor in 15.4%.

### Conclusion:

The study reflects the dire need for improvement in both, the knowledge and practice of preventive measures against DF in medical students. This calls for action from the Public



Health Authorities . It is of utmost importance for the students in medical field to be at the maximum level of knowledge and practice against such diseases as they are responsible for being a role model for the rest of the community.

## INTRODUCTION

DF Is the most important mosquito borne viral disease in the world. Today about 2.5 billion people, or 40% of the world's population, live in areas where there is a risk of dengue transmission according to WHO. DF is endemic in at least 100 countries in Asia, the Pacific,

the Americas, Africa, and the Caribbean. WHO estimates that 50 to 100 million infections occur yearly, including 500,000 Dengue Hemorrhagic Fever cases and 22,000 deaths, mostly among children. The first reported DF outbreak in Pakistan occurred in June 1994. DF epidemic hit

Pakistan in 2011. centralized in Lahore and spreading in Punjab province. According to National Health Survey [NHS] report, as of 17 November 2011, a total number of 21, 115 cases had been reported. It is speculated to have killed over 300 of these cases. [1] As there is no vaccine or chemoprophylaxis, prevention is sought by reducing the habitat

and the number of mosquitoes and limiting exposure to bites. Vector control is implemented using environmental management and chemical methods. Proper solid waste disposal, elimination of stagnant water in domestic environment and improved water storage practices. Aerosol and liquid spray has to be applied directly to the adult mosquito for effective killing, e.g. household pesticides. Mosquito coil and electric mosquito mat/ liquid has to be placed near possible entrance, such as window, for mosquito. Long-sleeved clothes and long trousers shall be worn when going outdoors. Bodies could be protected from mosquito bite by applying insect repellent (containing DEET) on the clothes and exposed part of the body. Mosquito bednet could be used when sleeping outdoors or when the room is not air conditioned [2] In a developing country like Pakistan, preventable diseases such as dengue have the potential to cause the greatest mortality. Considering the magnitude of OF cases In our country last year, determining the students' response in terms of practice of preventive measures against it, was

the rationale of this study.

## REVIEW OF LITERATURE

DF has become the second most prevalent mosquito borne infection after malaria. In recent decades the epidemic has reached almost **120** countries with the most endemic regions being southeast Asia, Latin America, Asia and the Caribbean. The last few years have seen a major surge in the no of cases of df in Pakistan, particularly in the urban Punjab. Due to overcrowded cities, unsafe drinking water, Inadequate sanitation facilities, huge number of refugees and poor vaccination Pakistan is prone to large epidemic of various vector borne diseases. For last dyears dengue transmission is getting worst in Pakistan. [3] Few steps need to be taken to change the dengue friendly environment by specialized community based programs for proper solid waste disposal and improved storage practices. The preventive measures need to be strengthened to eradicate this disease. Urgent researches in this field are needed to direct further interventions. [4] This page provide a review of the literature addressed for this project both from the prospective of public health as well as from

the perspective of medical anthropology .The public health literature will be addressed firstly then we will move on to discussion on the anthropological literature that Informed this study, since it provides the theoretical spinal cord for research conducted. In essence, this chapter will address the dengue research that has been conducted within the discipline and which was considered relevant to this research project.[5] Research on dengue public health research on dengue concentrates mostly on the biological

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presence of virus. Some reduction strategies to combat the disease by eliminating vector breeding sites and so called integrated vector management. Anthropological research on dengue has focused on implantation of dengue and dengue fever prevention plans factors affecting community participation in vector control campaigns. (6) The department of health commission he SOCIAL SCIENCE RESEARCH CENTRE (SSRC) the university of Hong Kong conducted a survey on personal and environmental hygiene to examine public knowledge and attitude towards preventive measures for OF, The survey was conducted by telephonic interviews with 68 coded questions from december 1st to 30th december 2003. A total of 3136 successfully

completed interviews indicated that 31.9% and SG,G% of the respondents have good and fair knowledge of DF respectively and three fifth of theses carryout some preventive measures against DF. Nearly ail the respondents(97%) were aware of DF, [7] Another research about the knowledge, attitudes and practices regarding DF among adults of high and low socioeconomic groups were conducted by AGHA KHAN UNIVERSITY in 20Q9.In this a total of 400 individuals were approached for participation in the stirvey;200 from each high and low socioeconomic localities. It revealed that knowledge scores had significant association with education( $p=0.004j$  and socioeconomic status $p=0.02j$  of the individuals; the high socioeconomic group fared better in the knowledge domain, also the high socioeconomic group showed better preventive practices, [8]

## OBJECTIVES

Objectives of this study were to:

1. Determine the knowledge regarding preventive measures against DF.
2. Evaluate the practice of preventive measures against DF.

## OPERATIONAL DEFINITION

Each Questionnaire, for determination of knowledge and practice of preventive

measures against DF, is scored The maximum score is 24 and the minimum is 12, The result is divided into six categories as follows:

SCORES	PERCENTAGES	
22- 24	85« - 100%	
Excellent		
20- 22	60« - 85%	Very
Good		
18- 20	45% - 60%	Good
16- 18	30% - 45%	
	Satisfactory	
14- 16	15% - 30%	
	Insufficient	
12- 14	0% - 15%	Poor

## METHODOLOGY

### Setting:

Study was carried out at Q.A.MX, Bwp,

### Duration Of Study:

31lt May 2012 to IS" 1 July 2012

### Study Population:

M.B.B.S Students studying in Q.A.MX Bahawalpur.

### Sample Size:

Study was conducted on two hundred and forty five students.

## Sampling Technique:

Convenient sampling technique

## Sample Selection:

inclusion Criterion:  
All willing M.B.B.S Students studying in  
Q.A.M.C Bwp.

## Study Design:

Cross Sectional Descriptive Study.

## Data Collection:

Data was collected by predesigned  
questionnaire. After an Informed consent,  
the  
students were interviewed and the answers  
were entered into the relevant columns  
of questionnaire by the researcher.

## Data Analysis:

The data was analyzed manually.  
Distribution of different study variables and  
their  
percentages were calculated and shown in the  
form of figures and tables.

## RESULTS

Study was conducted among two hundred  
and forty five M.B.B.S students studying in  
Q.A.M.C

Bwp. In the study sample 67.4% were females  
and 32.6% were males. The class distribution

of  
the study population is described  
*Infigure(fig)*

The study revealed that viral cause of DF was  
known to 95.5% of study population, 91.43%  
knew

that its vector is mosquito and 35.57% named  
the specie *Aedot .ifi. j. -i.S*  
The common breeding site of vector that is  
clean stagnant water was known to 11.84%  
but

around 56.73% knew that stagnation of water  
was *necessary.(fig6)*

83.3% of students were aware of the most  
frequent biting time that is sunrise and  
sunset. *(fig7)*

82.86% knew about the unavailability of  
chemoprophylactic agent against *Df .ffigS.l*

87.35% were aware of the unavailability of  
the vaccine against *Df .flablel*

Major source of information for the students  
was found to be T V followed by  
Newspapers. *///#*

We found that 68.57% of the study  
population had their rooms sprayed and  
75.1% maintained

proper cleanliness of room that is on daily or  
alternate day basis. 49.39% had windows and  
doors of their room, screened. 95.51% of  
study population slept indoors and among  
these

61.54% were in habit of using mosquito  
mat/coil or liquid vaporizer in their room.  
Among the

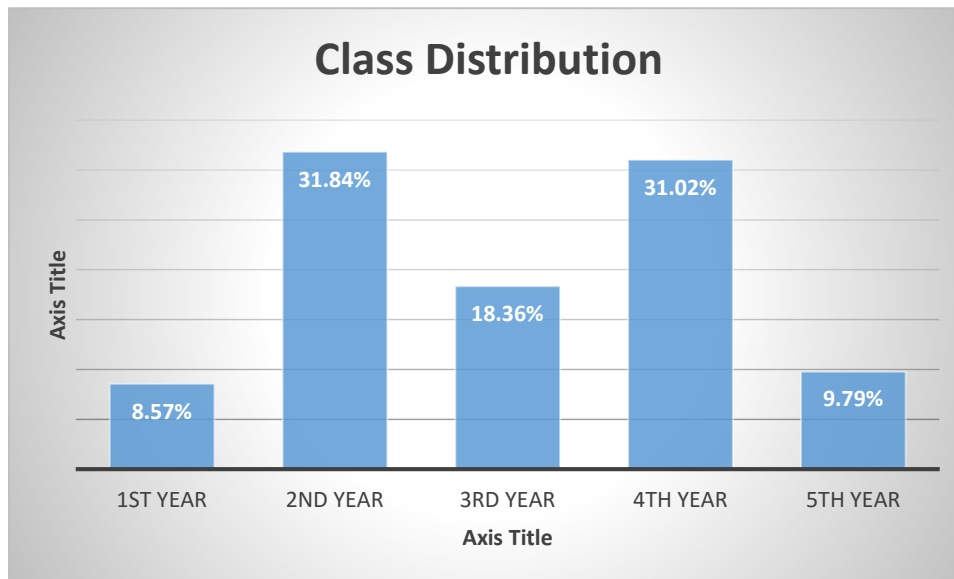
4.49% sleeping in open air none used  
mosquito net. 45.31% were in habit of closing  
collars and

cuffs or wearing full sleeves while going out  
around biting *time.flabk2)*

42.45% students used mosquito repellants of  
various companies. *{/fc/fl, idfigl0.2)*

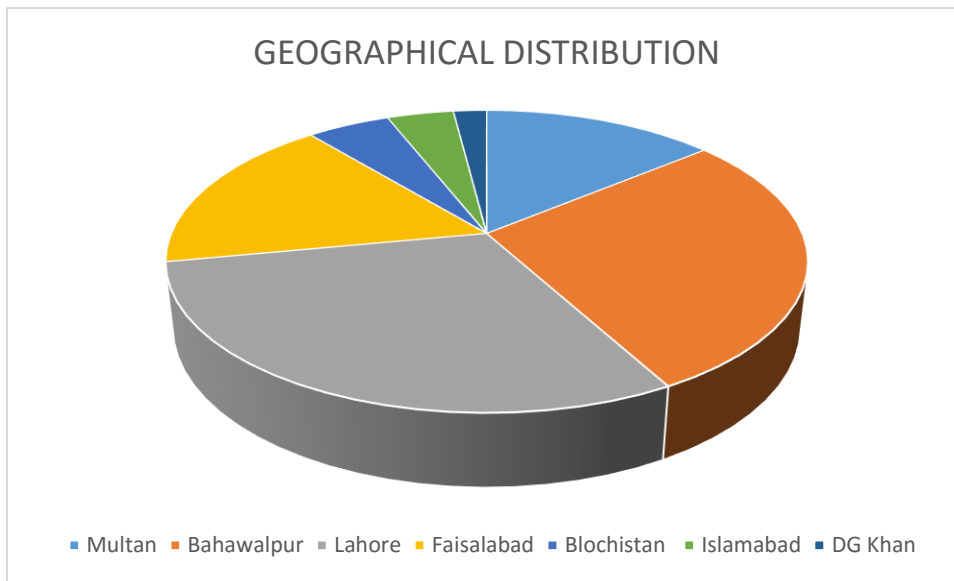
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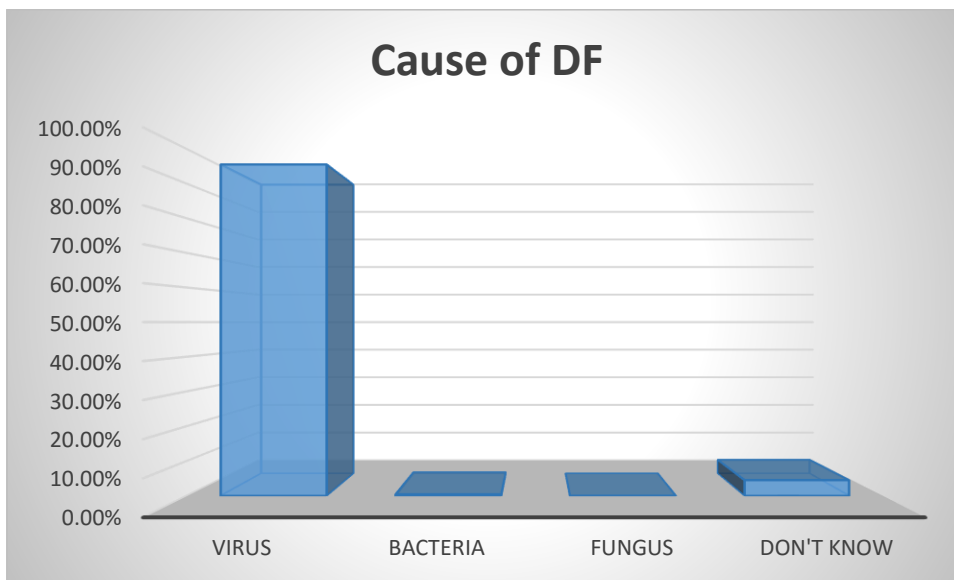


*1ST YBAR 2ND YEAR 3RD YBAR 4TH YEAR 5TH YBAR*

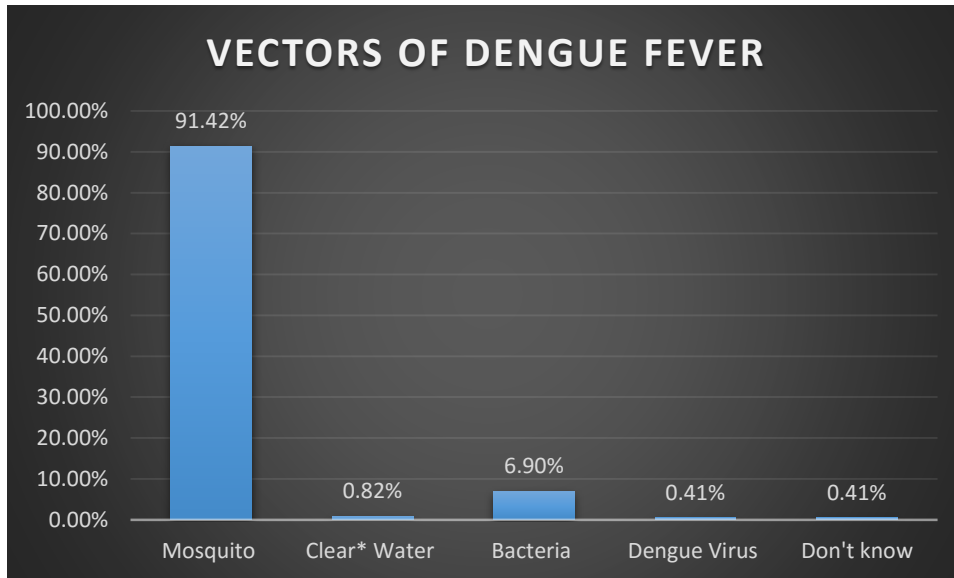
*Figure NO.1 ( M S S DISTRIBUTION OF STUDY POPULATION*



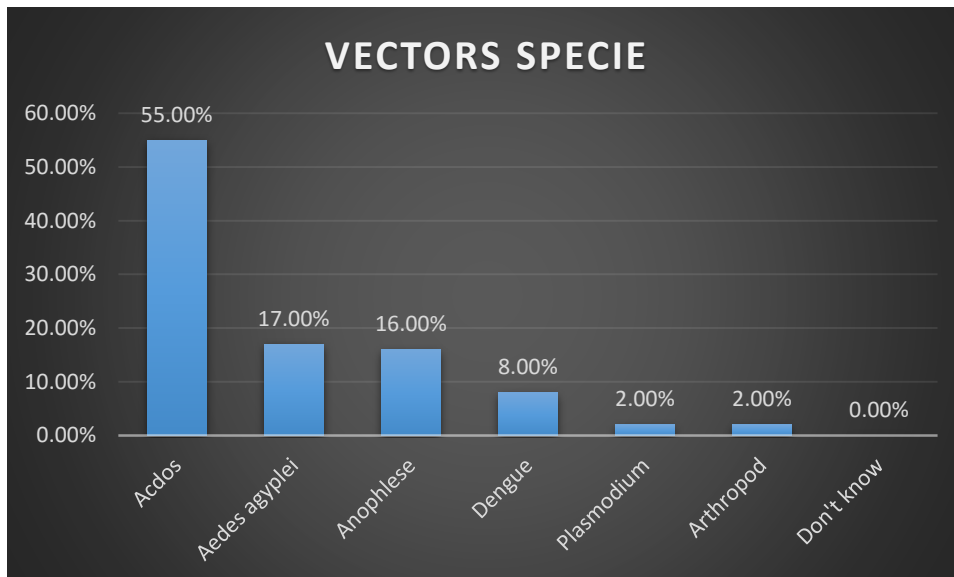
*FIGURE NO.2 GEOGRAPHICAL DISTRIBUTION OF STUDY POPULATION*



*FIGURE NO.4 Cause of DF*

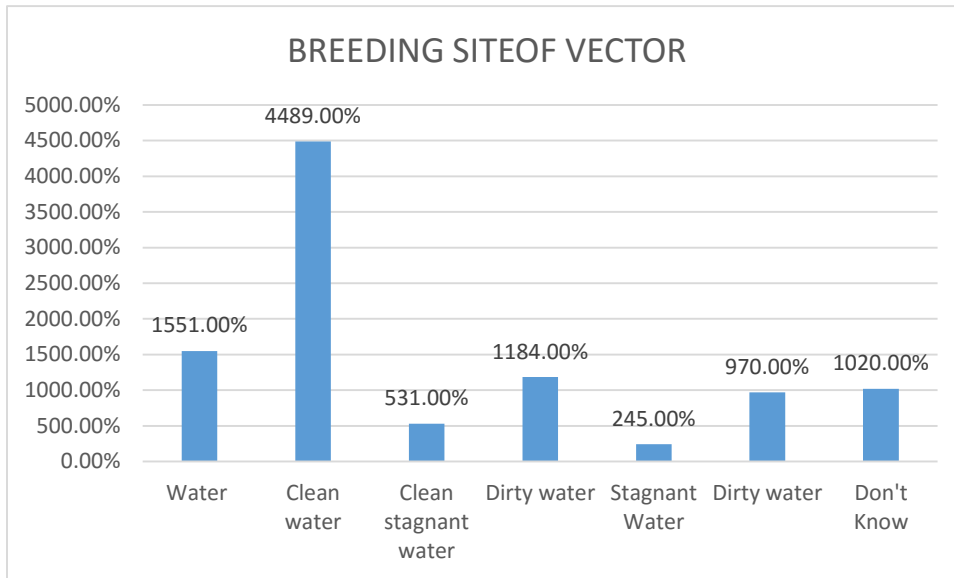


*naiiw NOA VECTORS OF DENGUE FEVER*

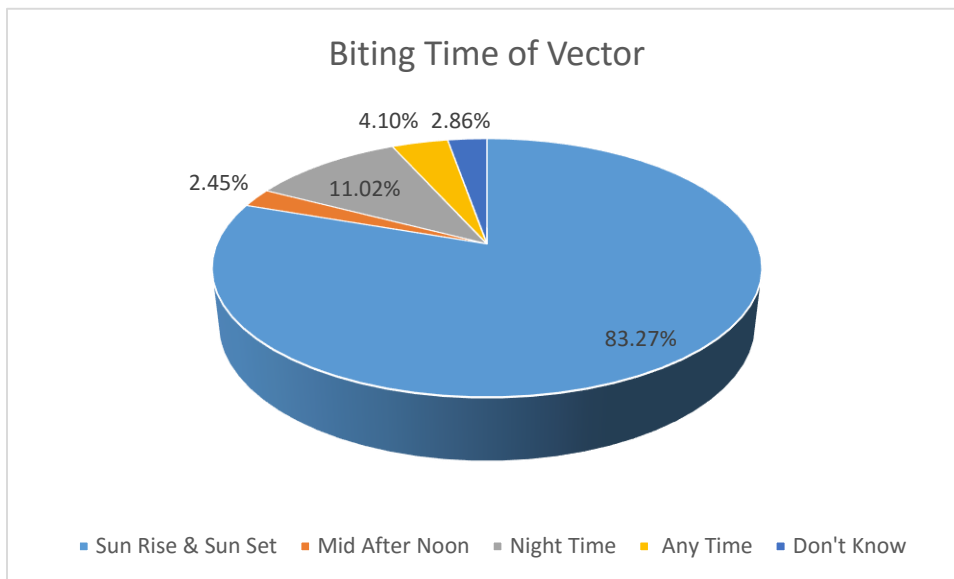


**FIGURE NO.4 VECTORS SPECIE**





**FIGURE NO.6 BREEDING SITE OF VECTOR**



**Biting Time of Vector**

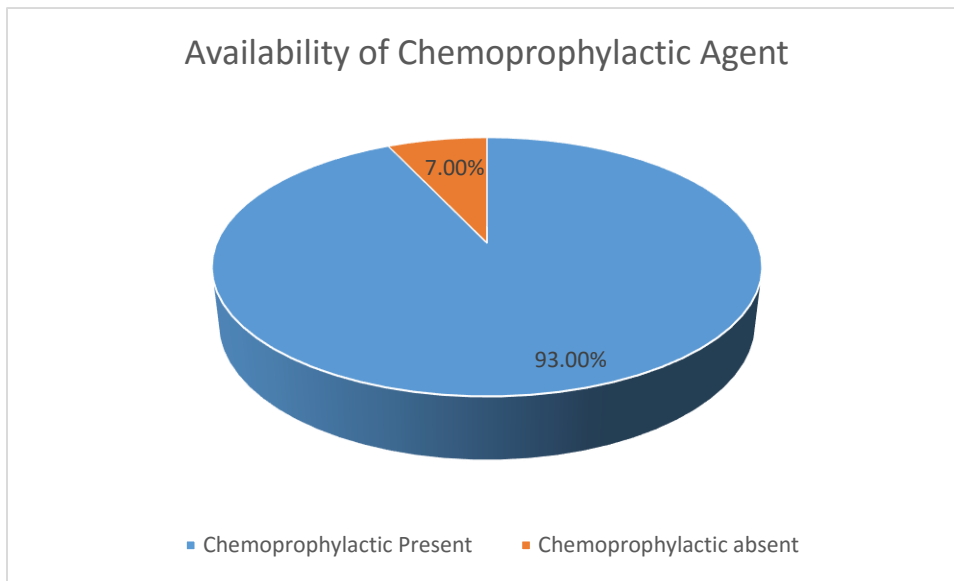
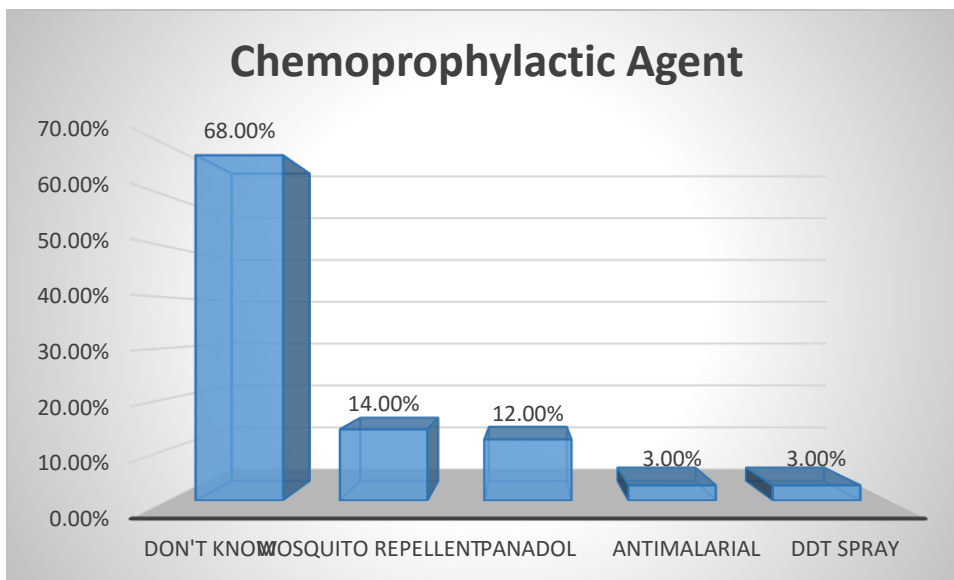
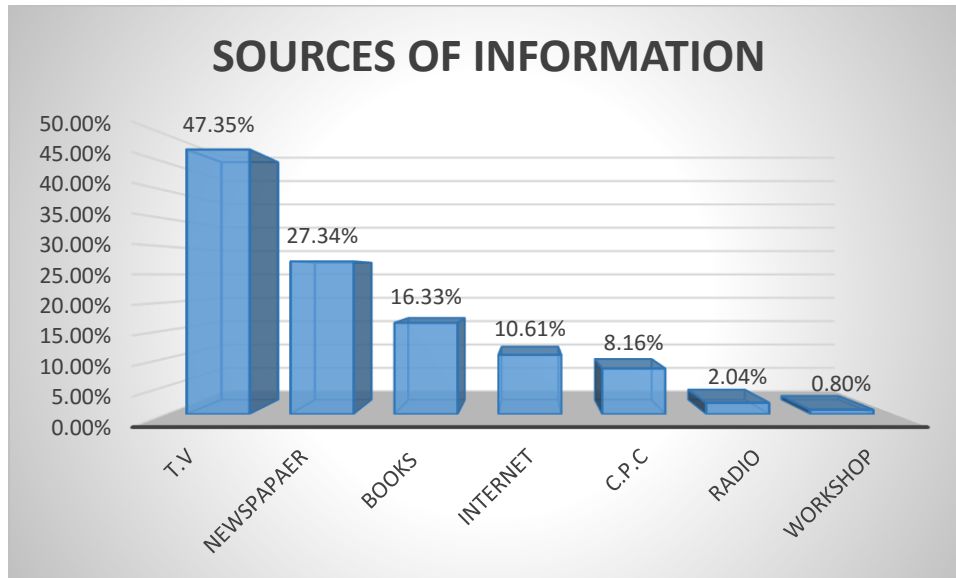


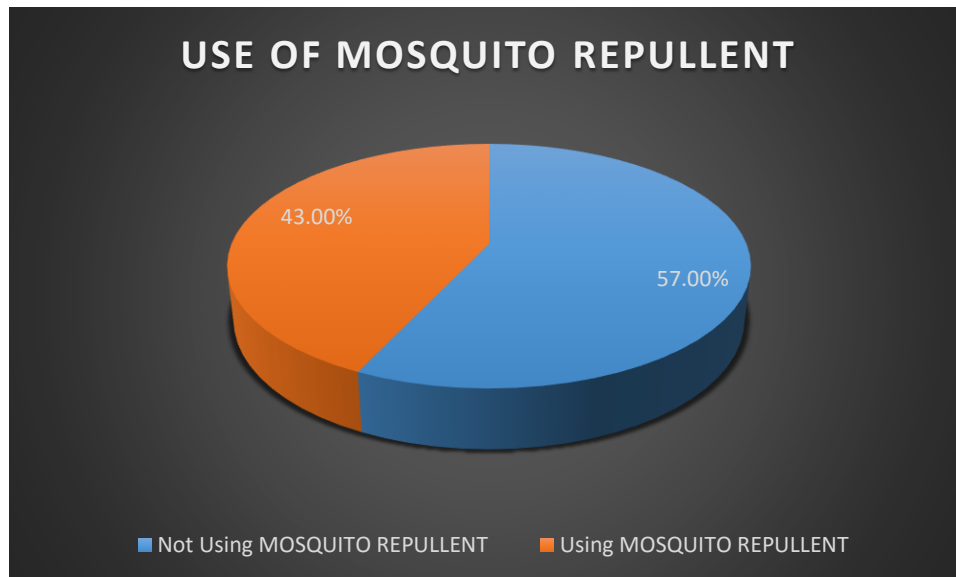
FIGURE NO.6.1 Availability of Chemo prophylactic Agent



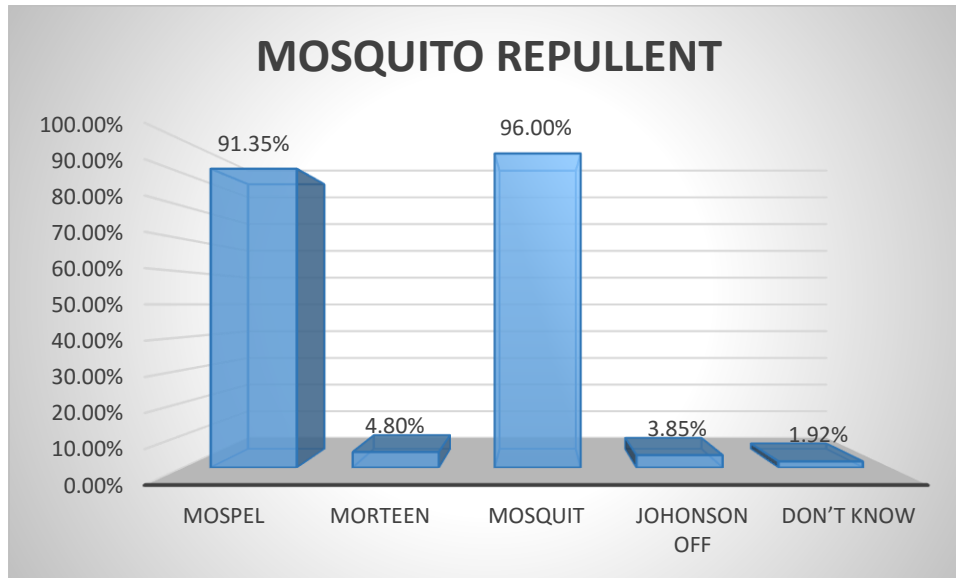
### Chemoprophylactic Agent



SOURCES OF INFORMATION



USE OF MOSQUITO REPULLENT



MOSQUITO REPULLENT

**Table No.1**

**VACCINE AVAILABLY**

Statement	Frequency	Percentage	Frequency	Percentage
Answers of Medical Students aboutVaccine availability	31	12.65%	214	87.35%

**Table No. 2**

**SLEEPING PLACE**

Statement	Indoor		Out Door	
	Frequency	Percentage	Frequency	Percentage
Sleeping Place	234	95.50%	11	4.50%

**Table No. 3**

## ROUTINE OF ROOM CLEANING

Statement	Everyday	Everyday	Alternate Day	Alternate Day	Once a Week	Once a Week	Longer than a Week	Longer than a Week
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
ROUTINE OF ROOM CLEANING	118	48.16%	66	26.94%	27	11.02%	34	13.88%

### **DISCUSSION**

Our cross sectional study illuminates that the percentage of medical students in Q.A.M.C, with appropriate knowledge, is approximately twice the percentage (38.5%) observed in adult population of Karachi in a similar study in

Agha Khan University Hospital(-AKUH) and Civil

Hospital(CHK) in November 2006.(7) The students were maximally aware of cause and vector but majority failed to quote vector's specie and a considerable proportion nominated Anopheles as the specie. Taking into account

the similarity, in-mode of transmission and early clinical feature that is fever, between DF and Malaria, common infectious disease of our country, students thought of the species to be same. It again was observed when common breeding site was asked, students answered dirty places, dirty water and simply water, again intermingling malarial vector with that of DF. Our results indicate 57.06% frequency of practice of preventive measures which is comparable to 48% found in a study in Kamphaengphet province in Thailand by Chulalongkorn University.(8)

In terms of room cleaning, 87.6% of the girls maintained adequate cleanliness and those who cleaned their rooms in longer time than a week were almost all boys that is 98%, as they remained outdoors longer and were less concerned with cleanliness of the room. The most prevaler.1 preventive measure was spraying rooms with mosquito spray , followed by use of mosquito mat/ coil or liquid vaporizer. This indicates that removing vector's breeding place was the prime focus.

Among mosquito repellants, majority opted for Mospcl, a highly advertised commodity, highlighting the importance TV holds in today's world. TV was also the most important source of information regarding DF in our study population.

## **CONCLUSION**

The study reflects the dire need for improvement in both, the knowledge and practice of preventive measures against DF in medical students. This calls for action from the Public Health Authorities .It is of utmost importance for the students in medical field to be at the maximum level of knowledge and practice against such diseases as they are responsible for being a role model for the rest of the community.

## **BEFEBEMCIS**

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