



## **A Study to Assess the Knowledge, Awareness and Preventive Practices Regarding Dengue Fever among Patients Visiting Medical OPD at Civil Hospital, Nadiad City**

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### **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## **ABSTRACT**

**Background:** Dengue, the mosquito borne disease has become global public health problem. The present study was conducted to assess the knowledge, awareness and preventive practices regarding dengue fever among patients visiting medical OPD at civil hospital, Nadiad City.

**Methods:** A cross-sectional study was conducted with 100 randomly selected patients from Civil Hospital, Nadiad during September to November 2021. A structured questionnaire was used covering socio-demographic characteristics of the participants, knowledge, awareness, treatment and preventive practices regarding dengue fever. Data were analyzed using descriptive, inferential.

**Results:** Of the 100 participants recruited in the study, 47% were females and 53% were males. A majority 63% belong to 15 - 45 years of age, were Hindus 80%, studied up to primary level (68%), resided in the urban area (64%) and 22% had past dengue exposure. Although patients had heard of dengue, the overall mean score of knowledge, awareness and preventive practices regarding dengue fever was  $16.5 \pm 1.4$ , with 23%, 68%, and 9% participants having good, average and poor knowledge respectively regarding dengue.

**Conclusion:** It was evident that the patients have the sufficient knowledge regarding dengue fever

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and its prevention, but execution of this knowledge in putting the dengue preventive measures to practice was poor. There is a need to create awareness for hygiene and cleanliness to prevent mosquito bites.

*Keywords: Awareness; dengue fever; dengue knowledge; dengue preventive measures; patients.*

## 1. INTRODUCTION

Dengue fever, also called as break-bone fever, is a mosquito-borne viral infection that causes a severe flu-like illness and is a major public health problem in India. Dengue disease can vary from mild to severe and severe forms include dengue shock syndrome and dengue hemorrhagic fever (DHF) [1]. There are four strains of dengue viruses which are transmitted in the community through the bites of *Aedes aegypti* and *Aedes albopictus* mosquitoes. Outbreaks and deaths due to dengue disease have been noted in the last decade from the Northern states of Haryana, Punjab, and Uttar Pradesh, Southern states of Andhra Pradesh, Tamil Nadu, Kerala, and Karnataka, Western parts of Gujarat and Rajasthan, as well as the Eastern states like West Bengal [2,3]. It is a major global public health concern, as more than 2.5 billion people are estimated with this infection [2] and more than  $50 \times 10^6$  new cases are being projected annually [3]. Recently, the National Vector Borne Disease Control Program projected that dengue-infected cases are topped in Gujarat in comparison to Karnataka, although other states and union territories showed marginal increments till 2019 and then exhibited a decline in dengue cases due to probable increased controlling measures and better sanitization facilities in India [4]. In order to assess the community knowledge, awareness and preventive practices related to dengue fever and its association, if any, with demographic variables a study was undertaken among the subjects attending outdoor patient department (OPD) and indoor admitted patients in Civil Hospital, Nadiad in the state of Gujarat, India.

## 2. MATERIALS AND METHODS

A cross-sectional study was conducted with 100 randomly selected patients, who are willing to participate in the study from Civil Hospital, Nadiad, between September to November 2021. A sample size has been decided on the basis of power analysis with confidence level of 95%. A structured questionnaire was used covering

socio-demographic characteristics of the participants including their knowledge, awareness, treatment and Preventive practices questions regarding dengue fever. Incomplete questionnaires were dropped out. Participants who are not willing to participate were excluded. The data has been collected by self reported questionnaire translated in Gujarati language. This study was approved by the Institutional Research Committee of the Dinsha Patel College of Nursing, Gujarat. Participat was assured about the confidentiality of their information, as no identifiers or personal information were collected. The data collection tool comprised of two sections, namely the participants' demographic details, structured questionnaire (20 items) which includes questions regarding knowledge, awareness, treatment and Preventive practices among patient regarding dengue fever. The score above 80%, 70-80% and less than 70% is considered as good, average and poor knowledge. The concurrent validity were obtained from doctors and nursing experts. The internal reliability were obtained by (Cronbach's alpha: 0.7) Data were analyzed using descriptive, inferential statistics. Categorical variables were interpreted using frequency and percentage. Chi Square-test were performed to assess the association. [5-16]

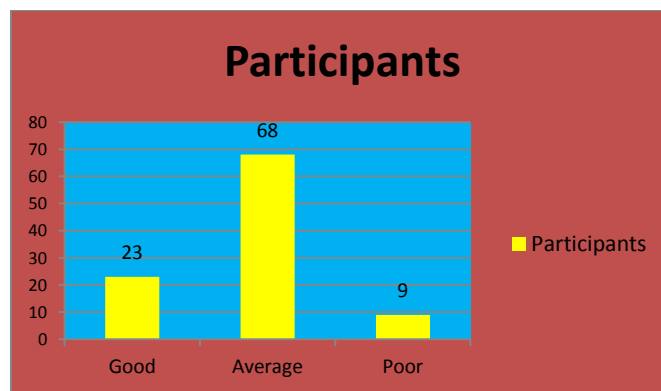
## 3. RESULTS

Among 100, (47%) 47 were females and (53%) 53 were males. Majority of patients 63(63%) were age between 15 to 45 years and 80(80%) were Hindu. Majority of patient 68(68%) had primary education, 64% from urban area, 22% had past dengue exposure, 66% were vegetarian [Table 1].

The overall percentage mean score of knowledge, awareness and preventive practices regarding dengue fever was  $16.51 \pm 1.473$ . Among them shows 23% participants had good knowledge, 68% participant had average knowledge and 9% had a poor knowledge.

**Table 1. Demographic details of the study participants (n=100)**

Demographic Data		Frequency (%)
Age	15-45	63 (63)
	45-60	20 (20)
	60-80	17 (17)
Sex	Male	53 (53)
	Female	47 (47)
Religion	Hindu	80 (80)
	Muslim	14 (14)
	Christain	6 (6)
Education	Illiterate	8 (8)
	Primary	68 (68)
	Higher	24 (24)
Occupation	Business / Job	63 (63)
	Housewife	33 (33)
	Retied	4 (4)
Marital Status	Married	85 (85)
	Unmarried	10 (10)
	Widow	5 (5)
Monthly Income	Less than 5000	47 (47)
	5000-15000	39 (39)
	15000 Or above	14 (14)
Economic Status	Below Poverty line	30 (30)
	Middle Class	70 (70)
Eating Habits	Vegetarian	66 (66)
	Non-Vegetarian	11 (11)
	Omnivore	23 (23)
Hygiene	Personal	5 (5)
	Environmental	10 (10)
	A & B Both	85 (85)
Emotional Response	Poor	13 (13)
	Average	24 (24)
	Good	63 (63)
Place of Seeking Medical Care	PHC	28 (28)
	CHC	10 (10)
	District Hospital	55 (55)
	Other	7 (7)
Past Degue Exposure	Yes	31 (31)
	No	69 (69)
Type of Residence	Rural	36 (36)
	Urban	64 (64)



**Fig. 1. Level of knowledge, awareness and preventive practice regarding dengue fever**

Association of level of knowledge, awareness and preventive practice regarding dengue fever with selected demographic variables.

The study represent there was statistical significance eating habits and emotional response of the patients. There was no statistical

significance between level of knowledge, awareness and preventive practice regarding dengue fever and demographic variables of patients such as age, gender, religion, education, occupation, marital status, monthly income, economic status, eating habits.

**Table 2. The association of level of knowledge, awareness and preventive practice regarding dengue fever with selected demographic variables**

Demographic Details		Scores			Total	Chi Square	P value
		Good	Average	Poor			
Age	15-45	16	41	6	63	1.7648	0.77892
	45-60	3	16	1	20		
	60-80	4	11	2	17		
Sex	Male	10	40	3	53	3.1603	0,205941
	Female	13	28	6	47		
Religion	Hindu	21	54	5	80	7.268	0.122386
	Muslim	2	8	4	14		
	Christain	1	4	1	6		
Education	Illiterate	3	4	1	8	2.3495	0.671769
	Primary	13	49	6	68		
	Higher	7	15	2	24		
Occupation	Business / Job	14	46	3	63	6.526	0.16316
	Housewife	7	21	5	33		
	Retied	2	1	1	4		
Marital Status	Married	17	62	6	85	8.3701	0.078925
	Unmarried	5	3	2	10		
	Widow	1	3	1	5		
Monthly Income	Less than 5000	12	29	6	47	2.8339	0.586002
	5000-15000	7	29	3	39		
	15000 Or above	5	8	1	14		
Economic Status	Below Poverty line	8	17	5	30	3.859	0.145222
	Middle Class	15	51	4	70		
Eating Habits	Vegetarian	19	44	3	66	10.2965	0.035719*
	Non-Vegetarian	3	7	1	11		
	Omnivore	1	17	5	23		
Hygiene	Personal	1	3	1	5	2.6766	0.0613308
	Environmental	1	7	2	10		
	A & B Both	21	57	7	85		
Emotional Response	Poor	3	7	3	13	10.8056	0.028838*
	Average	10	12	2	24		
	Good	10	49	4	63		
Place of Seeking Medical Care	PHC	9	16	3	28	9.2208	0.161537
	CHC	5	4	1	10		
	District Hospital	7	42	6	55		
	Other	2	4	1	7		
Past Degue Exposure	Yes	6	22	3	31	0.3406	0.843392
	No	17	46	6	69		
Type of Residence	Rural	4	28	4	36	4.5262	0.104026
	Urban	19	40	5	64		

• Statistically significant

#### 4. DISCUSSION

Our study found that the majority of participants own basic knowledge about dengue fever, reflect the illness to be serious up to some level of prevention and treatment seeking. There has been, average knowledge and practices regarding measures to reduce larvae and mosquitos in living spaces. The higher knowledge score was found to be associated with the emotional response and eating habits.

Similar findings were found in cross-sectional studies conducted in Malaysiya [17]. Such an attitude may hinder the efforts in dengue prevention, as preventive measures may be deemed not necessary by healthy people who did not consider themselves to be at risk of dengue.

The finding suggests patients had average knowledge regarding dengue fever. The study represent there was no statistical significance between level of knowledge, awareness and preventive practice regarding dengue fever and demographic variables of patients such as age, gender, religion, education, occupation, marital status, monthly income, economic status, except eating habits and emotional response.

#### 5. CONCLUSION

This study report that the patients have the sufficient knowledge regarding dengue fever and its prevention, but there is a lack in practice to follow preventive measures. There is a need to create awareness for hygiene and cleanliness with prevention of mosquito bites.

#### ETHICS DECLARATIONS AND CONSENT

Dinsha Patel College of Nursing, Institute Ethics Committee reviewed this study and granted ethical approval. Consents has been obtained from all participants.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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