

A Study to Assess the Knowledge Regarding Effect of Papaya Leaf on Dengue Fever among Women Under Makkalakotta Urban PHC at Mysore with a View to Prepare Information Guide

Jiji .V ¹, Biji Kuriakose²

¹OBG, KVC, Mysore/ Rajiv Gandhi University of Health Sciences, India

²CHN, BGS/Rajiv Gandhi University of Health Sciences, India
Email: jijihak[at]gmail.com.

Abstract: *Background:* One of the most dangerous infectious diseases, dengue fever is spread by mosquitoes. If the patient receives the right care, they can recover as quickly as possible; otherwise, it could be fatal. Papaya leaves are excellent for improving the quality of life when dengue is present. The aim of this study was to evaluate women living near the Makkalakotta urban primary health center's understanding of the effects of papaya leaf. *Methodology:* For the study, a descriptive strategy was used. A descriptive survey design was employed for the research. 80 women from the urban primary health center of Makkalakotta made up the sample. The sample was chosen via purposeful sampling. Data were collected via a questionnaire that includes knowledge assessment questions, and data were then analyzed using descriptive and inferential statistics.

Keywords: Dengue fever, Papaya leaf, Women's awareness, Recovery, Urban primary health center

1. Introduction

The Mosquitoes spread the dengue virus, sometimes known as "break - bone fever, " to humans. It is more frequently recognized as normal in tropical and subtropical climates. The majority of dengue patients won't have any side effects. The most well - known side effects are headaches, rash, nausea, body aches, high fever, and migraines. Most sick persons get better in 1 to 14 days. Some sufferers of dengue are so ill that they need to visit a clinic for treatment.

The main species of female Aedes mosquitoes that spread dengue fever is Aedes aegypti. The pathogen has five distinct serotypes. Often, exposure to one kind of contamination confers permanent immunity to that kind but just transient immunity to the others. The ensuing sickness of a different kind brings up even more serious issues. In order to confirm the diagnosis, further tests are available, such as those that check for virus - specific antibodies or RNA.

The infection can be recognized and found in the blood, serum, and plasma four to five days after the commencement of dengue fever. Most people can have dengue infection antibodies found using serologic tests within 10 days of the early stages of disease. However, there are more lab testing techniques available to identify dengue fever.

The choice of analytical technique depends on the patient's clinical symptoms, the time of year that tests are available, the cost, and the proximity of the research center offices. Dengue fever has no reliable vaccination. Given the clinical symptoms and negative effects experienced by the patients in such situations, it is often disregarded. For effective management of dengue fever, the early febrile stage must be treated

Papaya leaf extract serves as the main treatment in the absence of a valid prescription from an Indian or allopathic physician. A tiny glass of papaya juice, drunk twice daily, has a significant impact on platelet counts and reduces fever, according to studies.

2. Significance of Study

Dengue has been named as one of the top ten global health concerns for 2019 by the World Health Organization (WHO). Brady et al. estimate that 3.9 billion individuals, or 40% to 50% of the global population, face pollution - related health risks. Dengue affects 128 nations worldwide, with Asia bearing 70% of the burden. Dengue infections increased overall, rising from 0.5 million cases reported to the WHO in 2000 to > 3.34 million cases documented in 2016. 4.3 million cases worldwide were reported in 2019, a notable increase from the overall numbers in 2017, which fell. According to a sliding request, Brazil has the most dengue illnesses globally in 2019. .

In India, 110 473 dengue cases were reported between January and October 2022, according to the latest available data, which is similar to the number of cases reported in 2018 (101 192). There were substantially more dengue cases reported in previous years: 188 401 in 2017, 157 315 in 2019, and 193 245 in 2021. When the COVID - 19 wave began in 2020 in India, the prevalence of dengue fever dropped by 56–60% (44 585).⁵ The minimum number of months required for A aegypti dengue transmission in India increased by 1.69% year from 1951 to 2012, reaching 5 months.⁶ However, locations with a high dengue prevalence run the risk of a dual pandemic, which could tax healthcare systems as the world battles to deal with the dengue

Volume 12 Issue 8, August 2023

www.ijsr.net

Licensed Under Creative Commons Attribution CC BY

The number of dengue cases in the State is rising; as of October 2022, they have already surpassed the 7, 189 instances registered for the entire previous year. According to data from the State Health Department, the State reported 7, 108 dengue illnesses and four fatalities between January and October 18 of 2022. Two of the deaths happened in Udupi, while one fatality each was reported from Vijayapura and Chickballapur. More than half of the total was added by the State in the most recent quarter. With over 18% of the State's total cases this year, Bengaluru continued to have the highest proportion of positive cases. From 351 cases in July, Bengaluru's dengue case count has climbed by more than three times.

Papaya leaf juice is a terrific technique for dengue sufferers to raise their platelet count. It can really be fatal for dengue patients when their platelet count is drastically decreased. Patients with dengue should aim to raise their platelet count, and papaya juice has been demonstrated to be successful in doing so.

A patient who has been diagnosed with dengue or malaria receive both papaya leaf juice and allopathic treatment. The juice from papaya leaves will help the growth of platelets and red blood cells. Red blood cells are essential for delivering oxygen to the trillions of cells that make up the body. Additionally, papaya juice helps the body get more oxygen, which could boost immunity.

A 45 - year - old patient who had been bitten by a mosquito carrying dengue fever was the subject of a study to find out the effectiveness of Carica papaya leaf extracts against the disease. To treat dengue fever, the extract was prepared in water. A dengue fever patient got 25 mL of an aqueous extract of C. papaya leaves twice daily, in the morning and evening, for five days in a row. Before the extract was given to the patient, blood samples were analyzed. White blood cells, neutrophils, and platelets all decreased from 176 103/L, 8.10 103/L, and 84.0% to 55 103/L, 3.7 103/L, and 46.0%, respectively. After the administration of the leaf extract, the blood samples were tested again. PLT count increased from 55 103 to 168 103, and WBC increased from 3.7 103 to 7.7 103/L.

An investigation was carried out to evaluate the effectiveness and security of Carica papaya leaf extract in the treatment of dengue: a systematic review and meta - analysis. The study involved 439 people in all from four trials. Of the 439 people, 377 had data that could be examined. Both the overall analysis (mean difference [MD] =20.27 [95% confidence interval (CI) 6.21 - 34.73; P = 0.005]) and the analysis carried out after the fourth day (MD =28.25 [95% CI 14.14 - 42.37; P 0.0001]) revealed that C. papaya leaf extract was associated with an increase in platelet count. After 48 hours, there was no change between the C. papaya and control groups (MD = 13.38; 95% CI:

7.71 - 34.51; P = 0.21; MD = 13.38; 95% CI: 7.71 - 34.51). Days spent in the hospital were much fewer.

The findings of the study will allow the researcher to contribute knowledge to future studies on the connection between papaya leaves and dengue fever. Health practitioners will be able to concentrate better and educate the public about the advantages of papaya leaves in the treatment of dengue fever as a result. On the other hand, increasing awareness might contribute to better service.

General objective

To assess the knowledge regarding effect of papaya leaf on dengue fever among women

Specific objectives

Objectives of the study were

- 1) To assess the knowledge regarding effect of papaya leaf on dengue fever among women under Makkalakootta Urban PHC Mysore
- 2) To find out the association between the level of knowledge of women regarding effect of papaya leaf on dengue fever with selected demographic variables

Study design

For the research, a descriptive survey design was used. The sample size for the current study was 80 women's from Makkalakootta Urban PHC at Mysuru. Purposive sampling techniques were used to choose the samples. Data was collected by using a structured knowledge questionnaire which consists of 20 questions about effect of papaya leaf on dengue fever and data was analyzed by using descriptive and inferential statistics

Sampling criteria

Inclusion criteria

- Women who are between 20 - 50 years
- Women's who knows English
- Women's who knows English

Exclusion criteria

- Women who are not co - operative
- Women who are not willing to participate
- Women who are available at the time of study

Limitations

- Study limited to women
- Women selected by non - random sampling
- Study conducted at only one setting

3. Result and Discussion

Section 1: Demographic variables

Table 1: Frequency and percentage distribution of antenatal mothers according to demographic variables

S. NO	Demographic variables		Children	
	Characteristics	Category	Frequency	Percentage (%)
1	Age in years	a.20 - 35	53	66.25%
		b.36 - 50	27	33.75%
2	Education	a.1 - 12 th standard	60	75%
		b. Above 12 th standard	20	25%
3	Family income	a. Up to 10000	45	56.25%
		b. Above 10000	35	43.75%
4	History of dengue fever	a. yes	18	22.5%
		b. No	62	77.5%
5	Awareness about effect of papaya leaf on dengue fever	a. Yes	58	72.5%
		b. No	22	27.5%
6.	Hospitalization due to dengue fever	a. Yes	62	22.5%
		b. No	18	77.5%

Section II:

Data on knowledge regarding effect of papaya leaf on dengue fever among women

Table 2

Knowledge scores	Max score	Mean	Mean %	Median	SD
Effect of papaya leaf on dengue fever	20	17.5	87.50%	18	2.48

Table 2 shows that the mean percentage, median and standard deviation on knowledge regarding effect of papaya leaf on dengue fever. The obtained mean were 17.5 and the standard deviation of 2.48. it was inferred that the women have good knowledge regarding the effect of papaya leaves on dengue fever.

Section 3: Analysis of association between knowledge score with selected background variable

Demographic variables		Level of knowledge gain		DF	Table value	Chi-square value
		Below median	Above median			
		N	N			
Age	20 - 35 yrs	25	27	1	3.841	2.86 (NS)
	36 - 50 yrs	19	9			
Education	1 st - 12 th std	29	31	1	3.841	8.23 (S)
	Above 12	17	3			
Family income	Below 1000	22	23	1	3.84	0.0013 (NS)
	Above 1000	17	18			
History of dengue fever	Yes	18	5	1	3.84	15.56 (S)
	No	17	40			
Awareness on effect of papaya leaf on dengue	Yes	17	41	1	3.84	14.99 (S)
	No	17	5			
Hospitalization due to dengue fever	Yes	18	5	1	3.84	15.56 (S)
	No	17	40			

4. Discussions

Findings on data on knowledge regarding effect of papaya leaf on dengue fever

The obtained mean was 17.5 with standard deviation of 2.48. It was inferred that the women has good knowledge regarding effect of papaya leaf on dengue fever

Findings on association between knowledge regarding importance of colostrum feeding with selected demographic variables.

There is an association with selected demographic variables such as education $X^2=8.23$ (table value=3.841), history of dengue fever $X^2= 15.56$ (table value=3.841), awareness on effect of papaya leaf on dengue $X^2= 14.99$ (table value=3.841) and hospitalisation due to dengue fever $X^2 = 15.56$ (table value=3.841) There is no association with the selected background variable age $X^2 =2.86$ (table value=3.841) and family income $X^2 = 0.0013$ (table value=3.841).

Above finding supported by a similar study conducted to assess the knowledge regarding effect of papaya leaf on dengue fever. The findings reveal that knowledge on effect of papaya leaf on dengue fever significantly associated with education, frequency of hospitalization.

5. Interpretation and Conclusion

Research can continued in creating awareness on effect of papaya leaf in reducing the health issues due to dengue infection

Initiate the health personnel to motivate and organize various awareness strategies to improve the wellbeing of general population from various infectious diseases.

Integration of theory and practiced is vital need and is important in nursing profession therefore study result can be integrated in nursing practice.

Concentrating more on practical use of medicinal plants available locally and traditional system of medicine for curing the diseases

References

- [1] Hasan S, Jamdar SF, Alalowi M, Al Ageel Al Beaiji SM. Dengue virus: A global human threat: Review of literature. *J IntSocPrev Community Dent.*2016 Jan - Feb; 6 (1): 1 - 6. doi: 10.4103/2231 - 0762.175416. PMID: 27011925; PMCID: PMC4784057.
- [2] KranthiSwaroopKoonisetty, NasrinAghamohammadi, TamannaUrmi 3, Sare İlknurYavaşogluShahinur Rahman, Rajesh Nandy and UbydulHaque. Assessment of Knowledge, Attitudes, and Practices Regarding Dengue among Physicians: A Web - Based Cross - Sectional Survey. *Behav. Sci.*2021, 11 (8), 105; <https://doi.org/10.3390/bs11080105>
- [3] D. K. Jayaweera, S. Weerasinghe, D. Warapitiya& S. Subasinghe. A study on knowledge, attitudes and practices regarding dengue fever, its prevention and management among dengue patients presenting to a tertiary care hospital in Sri Lanka. *BMC Infectious Diseases.* Article number: 981 (2021) <https://doi.org/10.1186/s12879 - 021 - 06685 - 5>
- [4] Ahmad N, Fazal H, Ayaz M, Abbasi BH, Mohammad I, Fazal L. Dengue fever treatment with Carica papaya leaves extracts. *Asian Pac J Trop Biomed.*2011 Aug; 1 (4): 330 - 3. doi: 10.1016/S2221 - 1691 (11) 60055 - 5. PMID: 23569787; PMCID: PMC3614241.
- [5] JaykaranCharan, Deepak Saxena, Jagdish Prasad Goyal, and Sandul Yasobant1. Efficacy and safety of Carica papaya leaf extract in the dengue: A systematic review and meta - analysis. *Int J Appl Basic Med Res.*2016 Oct - Dec; 6 (4): 249–254. doi: 10.4103/2229 - 516X.192596.
- [6] S Z Halima, N R Abdulla and Z Atzan B A. Acute toxicity of carica papaya leaf extract. *Journal of medicinal plant research.* Vol 5 (10). Pp 1867 - 1872.2011