

## Effectiveness of dengue free package on knowledge regarding prevention of dengue fever among the care takers of children admitted in pediatric ward at selected hospital, Tiruvannamalai

S. Vijayalakshmi and U. Udayashankari \*

*Vignesh Nursing College, The Tamil Nadu Dr. M. G. R. Medical University, Chennai, India.*

World Journal of Advanced Research and Reviews, 2024, 22(01), 1757–1760

Publication history: Received on 09 March 2024; revised on 22 April 2024; accepted on 25 April 2024

Article DOI: <https://doi.org/10.30574/wjarr.2024.22.1.1188>

### Abstract

**Background:** Dengue is a vector borne viral infection that endangers an estimated 2.5 billion people. Disease caused by dengue ranges from a relatively minor febrile illness to a life-threatening condition characterized by extensive capillary leak. A greater understanding of dengue has the potential to improve both the clinical management of individual cases and the control of the disease.

**Objective:** This study aims to assess the effectiveness of dengue free package on knowledge regarding prevention of dengue fever among the care takers of children.

**Methods:** A true experimental study was conducted in Government Medical College and hospital, Tiruvannamalai. The pretest and posttest design was used. Out of 50 children, 25 were in the experimental group and 25 in the control group, by using simple random sampling technique. Dengue free package on knowledge regarding prevention of dengue fever among the care takers of children used to assess the level of knowledge on prevention of dengue fever.

**Results:** The findings revealed that the level of knowledge on prevention of dengue fever in experimental group the mean score of (20±2.24) and the control group with the mean score of (8.86±2.23), and the calculated paired t value of t=28.19. Which is statistically significant at p<0.001 level. This study results clearly shows that there is significant improvement in the level of knowledge regarding prevention of dengue fever among the caretakers of children after providing dengue free package on knowledge regarding prevention of dengue fever among the care takers of children as scheduled in the hospital.

**Conclusion:** The study findings conclude that there was a significant level of knowledge improvement when compared to that of control group.

**Keywords:** Dengue free package; Level of knowledge; Care takers; Children

### 1. Introduction

Dengue fever is a fetal condition and is often ignored in both urban and rural areas. India is undergoing an epidemiologic, demographic and health transition. The expectancy of life has increased, with consequent rise in degenerative disease of aging and life style. Nevertheless, communicable disease is still dominating and constituting major public issues.

\* Corresponding author: U. Udayashankari

Compared to nine reporting countries regarding dengue fever in 1950s, today the geographic distribution includes more than 100 countries worldwide, many of these not reported dengue for 20 (or) more years and several have not known the history of disease.

More than 2.5 billion people are at risk of dengue fever, infection. The disease manifestation range from an influenza, like disease known as dengue fever to a severe, sometimes fatal disease characterized by hemorrhage and shock known as dengue hemorrhagic fever/ dengue shock syndrome which is on the increase number of rate.–WHO

### 1.1. Statement of the problem

A study to assess the effectiveness of dengue free package on knowledge regarding prevention of dengue fever among the care takers of children admitted in pediatric ward at selected hospital, Tiruvannamalai.

#### *Objectives*

- To assess the pre-test and post-test level of knowledge on prevention of dengue fever among caretakers of children in experimental and control group.
- To compare the pre and posttest level of knowledge on prevention of dengue fever among caretakers of children with in experimental and control group.
- To compare the pre and posttest level of knowledge on prevention of dengue fever among caretakers of children between experimental and control group.
- To associate the mean difference score of knowledge on prevention of dengue fever among caretakers of children in experimental and control group with their selected demographic variables.

### 1.2. Null hypothesis

- NH1: There is no significant difference in the level of knowledge on prevention of dengue fever among caretakers of children with in experimental and control group.
- NH2: There is no significant difference in the level of knowledge on prevention of dengue fever among caretakers of children between experimental and control group.
- NH3: There is no significant association of mean difference score of knowledge on prevention of dengue fever among caretakers of children in experimental and control group with their selected demographic variables.

### 1.3. Criteria for sample selection

#### *1.3.1. Inclusive criteria*

- The children who
- Had fever of unknown cause admitted in the pediatric ward
- Who were between the age group of 6-12 years
- Care takers of children who were willing to participate in the study.
- Care takers who can understand and respond in Tamil or English.
- Care takers of children who were available during the period of data collection.
- Caretakers who were constantly present with the children during the period of hospitalization.

#### *1.3.2. Exclusion criteria*

- Care takers who had already attended an education (or) awareness programme on prevention of dengue fever.
- Care takers who were present with the children diagnosed with dengue fever and isolated.

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## 2. Material and methods

The study was conducted at the pediatric ward government medical college and hospital at Tiruvannamalai, Tamil Nadu, India. The data was collected for period of one week. Prior permission from the authorities was sought by the investigator after explaining the purpose of the study. The research design adopted for this study was pretest and posttest design, which comes under the true experimental design. 50 children (25 in the experimental and 25 in the control group) were selected based on sample selection criteria through a simple random sampling technique. Rapport was established with care takers and a brief introduction about the research purpose was given. Written consent for the participation of care takers in the study was obtained. The post-test level was conducted using structured knowledge questionnaire with intervention which includes slide show, role play and pamphlet only for

experimental group and control group followed their routine care on 8th day assessed the level of knowledge of care takers on both experimental and control group.

### 2.1. Data analysis

Both descriptive and inferential statistics were used to analyze the data

## 3. Results and discussion

The major findings of the study are

The present study reveals that the experimental group age of child majority was between 12(48%) the age group of 3-6 years. The sex of the child majority of 14(56%) were female. The developmental classification of child 11(44%) were belongs to school age. Religion majority of children 11(44%) were Christian. Age of caretaker's majority 10(40%) were belongs to the age between 21-25 years. Educational status of caretaker's majority 12(48%) were completed primary education. The occupational status of caretaker's majority of 18(72%) were homemakers. Family income majority of 11(44%) had family income of Rs.2501-5000. Source of information on dengue fever majority of 18(72%) have not received any information.

**Table 1** Comparison of the pre and posttest level of knowledge within the experimental and control group N=50

Group	Pre Test	Post Test	Calculated 't' value
	Mean $\pm$ SD	Mean $\pm$ SD	
Experimental group	8.08 $\pm$ 2.44	20 $\pm$ 2.24	t= 18.57 S***
Control group	8.12 $\pm$ 2.3	8.68 $\pm$ 2.23	t= 1.79 NS

Note: - Statistically significant \*\*\*P<0.001 and N.S - Non significant

The findings revealed that the pretest mean score level of knowledge in experimental group was 8.08 with S.D 2.44 and the posttest mean score level of knowledge in experimental group was 20.52 with S.D 2.24 the calculated paired 't' value t= 18.57 which was found to be statistically significant at p<0.001 level, there was significant in the experimental group. In control group pretest mean score level of knowledge was 8.12 with S.D 2.33 and the posttest mean score level of knowledge in control group was 8.68 with S.D 2.33 the calculated paired 't' value t= 1.79 which was found to be statistically non-significant at p<0.05 level. This shows that the implementation of dengue free package had shown a statistically significant improvement in posttest level in experimental group compared to control

**Table 2** Comparison of the pre and post test level of knowledge between the experimental and control group. N=50

Assessment	experimental group	control group	Calculated 't' value
	Mean $\pm$ SD	Mean $\pm$ SD	
Pre test	8.08 $\pm$ 2.44	8.12 $\pm$ 2.33	t= 1.16 N.S
Post test	20.52 $\pm$ 2.24	8.68 $\pm$ 2.23	t= 28.19 S***

Note: - Statistically significant \*\*\*P<0.001 and N.S - Non significant

The findings revealed that the pretest mean score level of knowledge in experimental group was 8.08 with S.D 2.44 and the pretest mean score level of knowledge in control group was 8.12 with S.D 2.33 and the calculated unpaired 't' value t= 1.16 which found to be statistically non-significant, there is no significant difference in the pretest level of knowledge between the experimental and control group. The post test mean score level of knowledge in experimental group was 20.52 with S.D 2.24 and the posttest mean score level of knowledge in control group was 8.68 with S.D 2.33 and the calculated unpaired 't' value t= 28.19 which found to be statistically significant at p<0.001 level, there was significant difference in the posttest level of knowledge between the experimental and control group. This clearly shows that the

dengue free package improvement the knowledge on prevention of dengue fever among the care takers of children in experimental group compared to control group after intervention.

### **3.1. Associate the mean difference score of level of knowledge in experimental and control group with their selected demographic variables**

In experimental group the age of child, religion, educational status of child, age of the caretakers, educational status of the caretakers and source of information were statistically significant association in level of knowledge at  $p < 0.001$  level. And in the control group all of the variables are non-significant. There is no association with the level of knowledge in control group.

### **3.2. Implications**

Implication for nursing practice, nursing education, nursing administration and nursing research.

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## **4. Conclusion**

This study was done to assess the effectiveness of dengue free package on prevention of dengue fever among care taker of children admitted with fever at selected hospital in Tiruvannamalai. The study findings revealed that there is significant improvement in the level of knowledge regarding prevention of dengue fever among the care takers of children after providing dengue free package. Dengue free package helps to identify the incidence and prevalence of dengue among children. It is important nurse educational activity which is part of nursing care provided to the caretakers in children to promote and maintain the health of the children by practicing and utilizing the preventive measures daily and help to create a dengue free community.

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## **Compliance with ethical standards**

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

### *Statement of informed consent*

Informed consent was obtained from all individual participants included in the study.

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