International Journal of Research In Paediatric Nursing

E-ISSN: 2664-1305
P-ISSN: 2664-1291
www.paediatricnursing.net
IJRPN 2025; 7(1): 18-23
Received: 15-10-2024
Accepted: 19-11-2024

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A study to evaluate the effectiveness of planned teaching programme on knowledge regarding prevention and management of dengue fever among the mothers of school going children in selected rural areas at Hassan

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DOI: https://doi.org/10.33545/26641291.2025.v7.i1a.194

Abstract
Dengue fever, originally referred to as "water poison" associated with flying insects, was first described in 1780-1789. The term "dengue" originated from the Swahilli phrase "Ki dengapepo" meaning "cramp-like seizure caused by an evil spirit." It is an acute, febrile viral illness caused by flaviviruses. Dengue fever has become a significant public health issue in South East Asia, with annual cases ranging from 20 to 30 million and hemorrhagic cases of about 2,000. Despite poor or no surveillance systems in developing countries, the number of cases has increased significantly. Over 2.5 billion people, or 40% of the world's population, are at risk from dengue, with the World Health Organization (WHO) estimating 50-100 million infections worldwide annually. This study focuses on mothers of school-going children in a rural community in Hassan, aiming to assess the knowledge regarding prevention and management of dengue fever among mothers. The increase in dengue cases has provided insight into the need for better surveillance and management strategies. The study reveals that in the pre-test, the mean knowledge score was 10.81, with a mean percentage of 30.05%, and in the post-test, it was 20.9, with a mean percentage of 69.66%. The majority of mothers (58.33%) had inadequate knowledge, but after the planned teaching program, there was significant improvement. Out of 60 mothers, 55% had adequate knowledge, and 45% had moderately adequate knowledge. The findings suggest that the planned teaching program is an effective method for improving mothers' knowledge about prevention and management of Dengue fever.

Keywords: Dengue fever, water poison, flying insects, swahilli phrase "Ki dengapepo"

Introduction
Dengue fever was first referred as “water poison” is associates flying insect. The terms “dengue” is a Spanish attempt at the Swahilli phrase “Ki dengapepo” meaning “cramp-like seizure caused by an evil spirit”.

The first clinical case report dates from 1780-1789·Term dengue fever came into general use only after 1828. Dengue is an acute, febrile viral illness caused by an arbovirus of the genus flavivirus with four serotypes dengue virus DEN-1, dengue virus 2 DEN-2, dengue virus 3DEN-3 and dengue virus 4 DEN-4. The earliest reports of a dengue -like disease are from Chin Dynasty China 265-420. Japanese scientist first identified the virus in 1943. By 1956 the fourserotype of the virus were identified and every outbreak of the disease since has been due to virus belonging to one of the four serotypes.

In infants and young children, dengue present as a mild fever with rash. Older children have the classical symptoms of high fever, severe headache and pain behind the ear, pain in the joints, muscles and rash. Dengue hemorrhagic fever is characterized by high fever, bleeding and liver enlargement. It requires urgent hospitalization as it may even lead to death.

Entry of virus causes viraemia and the onset of fever and persists for about 3 days. It produces endothelial swelling, per vascular edema & infiltration with mononuclear cells in the small blood vessel leading to varying sign and symptoms.

Dengue fever: Is an acute febrile illness with sudden onset of fever (39^0Cand40^0C) followed by a remission of a few hours to 2 days.

Dengue hemorrhagic fever
DHF is a severe form of dengue fever caused by infection with more than one dengue virus. Anorexia, vomiting, epigastric discomfort, tenderness at the right costal margin and generalized abdominal pain are common.

Dengue shock syndrome (DSS)
Shock maybe manifested by rapid and weak pulse with narrowing of the pulse pressure (20 mm HG or less) or hypotension, with the presence of cold, clammy skin and restlessness.
The management of dengue fever is symptomatic and supportive. Bed rest is advisable during the acute febrile phase. Antipyretics or sponging are required to keep the body temperature below 40^0C oral fluid & electrolyte therapy is recommended for patients with excessive sweating, vomiting or diarrhea. The preventive measures include control of mosquitoes by individual and community action using anti adult and anti larval measures. Other measures include isolation under bed nets during the first few days: individual protection against mosquitoes.

Materials and Methods
- The methodology of a research study is defined as "the way of pertinent information is gathered in order to answer the research question or analyze the research problem. It enables the research to project a blue print of the research undertaken". Research methodology involves a systematic procedure by which the research starts from the initial identification of the problem to its final conclusion.
- A research overall plan for obtaining answers to the research question for testing the research hypothesis is referred to as the research design. The research design spells out the basic strategies that researcher adopts to develop evidence that is accurate and interpretable

Research Approach
Research approach is an umbrella that covers the basic procedure for conducting research. In the view of the nature of the problem selected, the present study is aimed to evaluate the effectiveness of planned teaching programme on prevention and management of dengue fever among mothers of school going children.
Therefore, an evaluative and educative research approach had been adopted in this study.
The classical approach for the conducting of evaluative and educative research consists of four broad phases.
- Determine the objectives of the programme.
- Develop a means of measuring the attainment of those objectives.
- Collect data.
- Interpret data in terms of objectives.

In view of the nature of problem selected for the present study to evaluate the effectiveness of planned teaching programme on prevention and management of dengue fever among the mothers f school going children in selected rural areas at Hassan.

Research Design
"Research design is a plan or organization of a scientific investigation answering the question is overall plan or blue prints the researcher selects to carry out the study.

The selection of design depends upon the purpose of the study, research approach and variable to be studied. The Pre -experimental design -one group pretest - post test design was selected to assess the knowledge regarding prevention and management of dengue fever among the mothers of school going children in alur rural area at Hassan.

Variables under study
Independent variables
Planned teaching programme on prevention and management of dengue fever

Dependent Variables
Knowledge regarding prevention and management of dengue fever among the mothers of school going children in Alur rural area at Hassan dist.

Demographic Variable
Age, Education, Occupation, Religion, Type of family, Income, methods to store the water, previous exposure to Dengue fever, source of information etc.

Research setting
Study will be conducted in selected Alur rural area at Hassan Dist.

Population
The population included in the present study is them others of school going children with age group of 6-12yrs.

Sample size
The total sample size consists of 60 mothers of school going children in Alur rural area at Hassan Dist.

Sampling technique
Non-probability, convenient sampling technique will be used

Sampling criteria
Inclusion Criteria: The study includes them others of school going children
- Who are willing to participate in the study
- Who can understand and speak Kannada and English.
- Who are available during the time of study

Exclusion Criteria
- Mothers of school going children who are unable to understand Kannada or English.
- Who are sick during the time of data collection?
- Who have under gone any training regarding dengue fever?

Development and Description of the tool
In this study a structured questionnaire was prepared by the investigator to assess the knowledge regarding prevention and management of dengue fever among the mothers of school going children.
The tool consists of 2 parts covering the following areas.
- **Part A:** Demographic data of mothers of school going children such as age, gender, religion, type of family, educational status, income, previous exposure, methods used to store the water, source of information.

- **Part B: Structured** knowledge questionnaire regarding prevention and management of dengue fever.

Collection of data

Formal permission will be obtained from the PHC. After obtaining the informed consent from the mothers the investigator provides the assurance about the confidentiality of the information obtained, the data will be collected in two phases.

- **Phase I**:-Pre test will be given to assess existing knowledge regarding prevention and management of dengue fever among the mothers with the help of structured questionnaire.
- **Phase II**:-The same questionnaire will be administered after 7days of teaching programme in Post test.

Data analysis methods

Data will be analyzed by using descriptive statistics and inferential statistics.

Descriptive Statistics: The frequency, percentage distribution and standard deviation will be used to analyze the level of knowledge regarding dengue fever.

Inferential Statistics

Paired t-Test will be used to compare the pre test and post test knowledge regarding prevention and management of dengue fever. Chi-square will be used to associate post test knowledge regarding prevention and management of dengue fever among the mothers of school going children with their selected socio demographic variables.

Results

Analysis and interpretation of effectiveness of PTP on prevention and management of dengue fever among the mothers of school going children.

Table 1: Comparison of pre test and post test knowledge score, N=60

Knowledge on	Knowledge Score				Student's paired t-test
	Pre-test		Posttest		
	Mean	SD	Mean	SD	
Meaning, Causes and Epidemiological Features	3.98	2.08	7.21	1.85	t=13.02*
Mode of transmission, Clinical features and Diagnosis	4.03	2.17	7.5	2.15	t=11.95*
Management, Prevention and Complications	2.8	1.80	6.18	2.08	t=13.13*
Overall	10.81	4.77	20.9	4.17	t=15.14*

*Significant at $p \leq 0.05$, **highly significant at $p \leq 0.01$, ***very high significant at $p \leq 0.001$ df=59

The above table shows comparison of pre and post test knowledge scores among the mothers of school going children. The difference between pre and post test knowledge scores are tested by using paired 't'test and found significant in all aspects.

Table 2: Comparison of overall knowledge score

	No. of Mothers of school going children	Mean +SD	Student's paired t-test
Pretest	60	10.81+4.77	t= 15.14 p=0.05* significant
Posttest	60	20.9+4.17	

*Significantatp≤0.05,df=59

The above table shows comparison of overall mean knowledge score before and after administration PTP. The difference between pre and post test knowledge scores are tested by using paired 't'test (15.14) and found significant in all aspects.

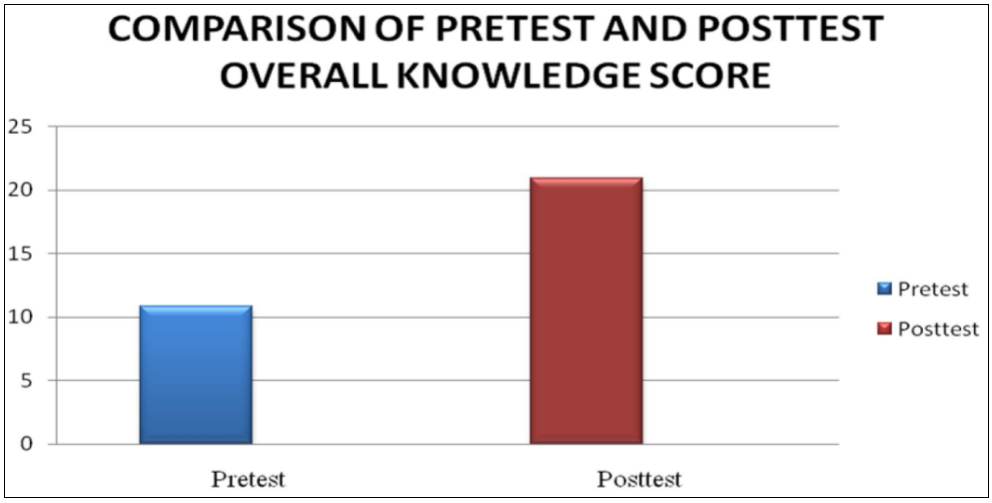

Fig 1: Bar diagram showing comparison of pretest and post test overall knowledge score

Table 3: Effectiveness of planned teaching programme

	% of pretest knowledge	% of post test knowledge	% of knowledge gain
Knowledge	36.05%	69.66%	33.61%

The above table shows effectiveness of planned teaching programme by comparing pretest and post knowledge score, which shows 33.61% of knowledge gain.

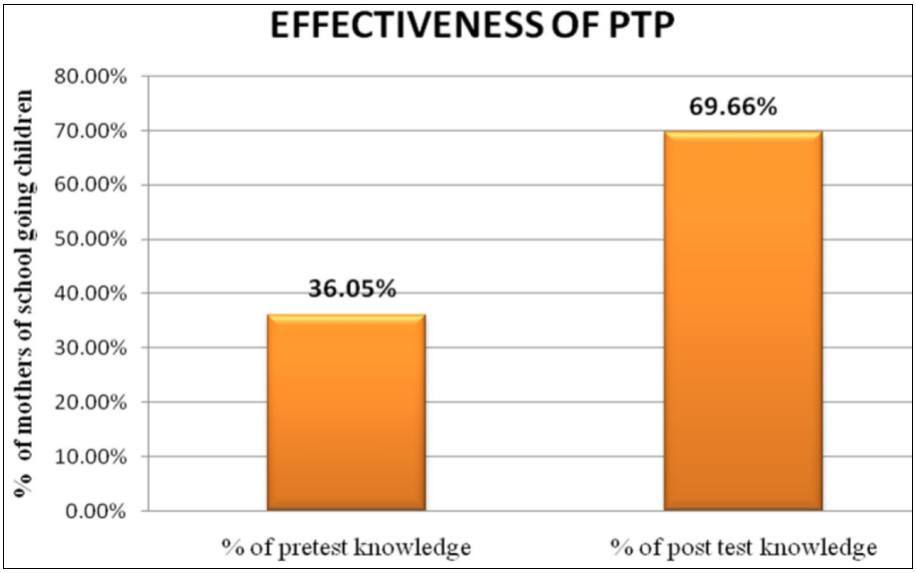

Fig 2: Bar diagram showing effectiveness of planned teaching programme

Conclusion

This study aimed to evaluate the effectiveness of planned teaching programme on prevention and management of dengue fever among the mothers of school going in selected rural areas at Hassan. A pre experimental design is used for the study. The data was collected from 60 mothers in selected rural areas.

The following conclusions were drawn from the present study are.

1. In pretest all mothers had inadequate knowledge. In post test 55% of mothers had adequate knowledge and 45% had moderate knowledge regarding prevention and management of dengue fever among the mothers of school going children.
2. Overall Post-test mean knowledge score was 20.9 with standard deviation of 4.17,which was more than the pre-test mean score 10.81 with standard deviation of 4.77.This showed that Planned teaching programme was effective.
3. The paired 't' test value on knowledge was15.14 at $p<0.05$ level which is greater than the table value, this showed that there was significant difference between pre and posttest scores on knowledge regarding prevention and management of dengue fever among the mothers of school going children. Hence hypothesis (H1) was accepted.
4. There was no significant association between the knowledge score regarding prevention of dengue fever among mothers of school going children with age, gender, educational status, occupation, family in come, religion, source of information, storage of water, previous exposure at $p>0.05$ level. Hence hypothesis (H2) was rejected.

Recommendations

Based on the findings of the study, the following recommendations are made.

- Similar study can be replicated on a large sample to generalize the findings.
- A similar study can be undertaken with control groups for effective comparison.

Conflict of Interest

Not available.

Financial Support

Not available.

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Padma R. A study to evaluate the effectiveness of planned teaching programme on knowledge regarding prevention and management of dengue fever among the mothers of school going children in selected rural areas at Hassan. International Journal of Research in Paediatric Nursing. 2025;7(1):18-23.