A STUDY ON AWARENESS AND PREVENTION OF DENGUE FEVER

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Abstract : Dengue fever**,** a mosquito-borne disease that occurs in tropical and subtropical areas of the world, is considered to be a significant threat for the mankind in both developing and developed countries. Dengue fever (DF) is the most rapidly spreading mosquito-borne viral disease in the world. The study aims to look at the association to dengue prevention practices with socio-demographic factors on knowledge about Dengue, Behavioural self-efficacy and attitude on Dengue outbreak in Salem Corporation.

Keyword **- Dengue fever, Prevention, Self-efficacy and Statistical analysis.**

I. INTRODUCTION

The World Health Organization (WHO) ranks dengue among the most important infectious diseases with major impact on international public health. The first record of a case of probable dengue fever is in a Chinese medical encyclopaedia from the Jin Dynasty (265–420 AD) which referred to a "water poison" associated with flying insects (WHO, 2009). The first recognized Dengue epidemics occurred almost simultaneously in Asia, Africa, and North America in the 1780s, shortly after the identification and naming of the disease in 1779. Dengue is caused by Dengue virus (DENV), a mosquito-borne flavivirus. DENV is an single stranded RNA positive-strand virus of the family Flaviviridae, genus Flavivirus. There is no vaccine to protect against dengue. Although progress is underway, developing a vaccine against the disease is challenging. With four different serotypes of the dengue virus that can cause the disease, the vaccine must immunize against all four types to be effective. Dengue remains an enormous public health threat globally and in India, which will remain a major public health issue for the coming decades. The disease burden poses major pressure on health care services and has social and economic implications. The Salem municipal corporation is also planning to depute persons in various sectors to go on a door-to-door drive to eliminate possible mosquito breeding grounds and create awareness among the people. In this research project, we focus on the study of awareness and prevention of Dengue fever with special reference to Salem Corporation with the help of Statistical concepts and techniques.

II. OBJECTIVES OF THE STUDY

- To assess the awareness towards Dengue fever.
- To evaluate the approach to prevent the Dengue fever.
- To determine the ideal appearance of Dengue fever.

III. METHODS AND MATERIALS

Research design is the plan for descriptive research effort that guides the researchers in a scientific method towards the achievement of the objectives. This research is based on observed and measured phenomena and derives information from actual knowledge rather than from theory or belief. The research tool used for this study was a self-administrated questionnaire that was circulated to public as respondents in the shape of a survey, and the data collected in this way were the primary data for the analysis. In this stage, based on the review of literature, different questions have been employed to study the awarenss of Dengue with special reference to Salem Corporation.

a. Population

The Centurion Municipality was declared as the Salem City Municipal Corporation from 1.6.1994. The Salem City Municipal Council celebrated its Centenary in 1966. Fittingly the Municipality was upgraded into a special grade Municipality with effect from 1.4.79. Salem City Municipal Limits were further extended by the inclusion of Suramangalam Municipality, Jarikondalampatty town Panchayat, Kannankurichi town Panchayat and 21 other Village panchayats with effect from 1.4.94, with an extent of 91.34 sq.kms. and provisional reports of Census India, population of Salem in 2011 is 8,29,267; of which male and female are 4,17,317 and 4,11,950 respectively.

b. Sample of the study

Since the public who are studying in the Salem Corporation, it was established quite unwieldy to select certain percentage of the population as the sample frame. So that only 200 samples were selected from the four different programmes on the basis of simple random sampling.

Table 1.1: Information on sample

Sl.No	Name of the zone	Sample size
1	Suramangalam	50
2	Hasthampatty	50
3	Ammapet	50
4	Kondalampatty	50
	Total	200

c. Data Analysis

In this study, the research has adopted quantitative data analysis. Quantitative data analysis is the procedure of presenting and interpreting numerical data. Questionnaire method of data analysis can be of immense value to the researchers who effort to draw meaningful results from large body of qualitative data. The research has adopted the following statistical tools to analyses the collected data and achieves the objective of the research. This study has used Microsoft Excel, Statistical Package for Social Sciences (SPSS) computer software and AMOS for analyzing the primary data of this study. These possible tools have been used to run the statistical analysis end to create suitable tables and figures.

IV. ANALYSIS AND INTERPRETATION

a. Cluster Analysis and Analysis of variance (ANOVA)

This procedure attempts to identify relatively homogeneous groups of cases based on selected characteristics, using an algorithm that can handle large numbers of cases. However, the algorithm requires specifying the number of clusters. We can specify initial cluster centres if we know this information. It is a statistical method used to test differences between two or more means. This technique is called "Analysis of Variance" rather than "Analysis of Means." As we see, the name is appropriate because inferences about means are made by analyzing variance for research.

In this study this technique is carried out based on the dimension of awareness and prevention of Dengue among Salem Corporation people and personal variables of the respondents on the various aspects relating to level of behavioural self-efficacy. The results are presented below with relevant interpretations.

Null Hypothesis (H_0): Personal factors associated on the behavioral self-efficacy don't influence the clusters.

The Table 1.2 describes the results of ANOVA for each personal classification on the behavioral self-efficacy considered.

Table 1.2: Details of Analysis of Variance (ANOVA)

Personal factors connecting to behavioral self-efficacy	F	p-value	Significant / Not Significant
Gender	0.08	0.92	NS
Age	45.21	0.00	S
Education	132.55	0.00	S
Occupation	1.33	0.27	NS
Personal Income	42.04	0.00	S
Marital status	6.46	0.00	S
Type of family	2.59	0.08	NS
A1	1.01	0.37	NS
A2	10.21	0.00	S
A3	78.11	0.00	S
A4	85.10	0.00	S
A5	72.52	0.00	S
A6	81.21	0.00	S
A7	9.30	0.00	S
A8	3.81	0.02	S

From the above Table 1.2, we conclude that the entire variables are influencing the clusters except few cases in the behavioural self-efficacy related variables.

The Table 1.3 describes the results of final clusters for each personal factor of respondents on the behavioral self-efficacy is considered.

Table 1.3: Final cluster centres

Personal factors connecting to behavioral self-efficacy	Cluster		
	1	2	3
Gender	1.74	1.75	1.72
Age	3.74	2.84	2.57
Education	1.21	2.52	3.17
Occupation	2.47	2.32	2.37
Personal Income	1.33	2.39	2.15
Marital status	1.94	1.79	1.74
Type of family	1.32	1.50	1.37
A1	2.87	2.91	2.78
A2	2.61	2.89	2.48
A3	2.36	3.00	2.11
A4	2.28	3.00	1.98
A5	2.29	2.96	2.00
A6	2.41	3.00	2.04
A7	2.05	2.39	1.78
A8	1.19	1.20	1.48

The cluster analysis transparently reveals that the samples are classified into 3 heterogeneous groups with respect to personal profile and various aspects of perception on influencing in behavioural self-efficacy of the respondents. The first cluster is grouped based on their opinion relating to 'Rarely' with various levels of perception on influencing in behavioural self-efficacy are fall under the Gender (Female), Age (Above 40Years), Education (Illiterate), Occupation (Household), Income (Below Rs.10000), Marital status (Married) and Type of family (Nuclear family) of the respondents.

The cluster analysis transparently reveals that the samples are classified into 3 heterogeneous groups with respect to personal profile and various aspects of perception on influencing in behavioural self-efficacy of the respondents. The second cluster is grouped based on their opinion relating to 'Never' with various levels of perception on influencing in behavioural self-efficacy are fall under the Gender (Female), Age (31-40 years), Education (HSC), Occupation (Working), Income (Rs.10000-Rs.20000), Marital status (Married) and Type of family (Joint family) of the respondents.

The cluster analysis transparently reveals that the samples are classified into 3 heterogeneous groups with respect to personal profile and various aspects of perception on influencing in behavioural self-efficacy of the respondents. The third cluster is grouped based on their opinion relating to 'Rarely' with various levels of perception on influencing in behavioural self-efficacy are fall under the Gender (Female), Age (31-40 years), Education (HSC), Occupation (Working), Income (Rs.10000-Rs.20000), Marital status (Married) and Type of family (Nuclear family) of the respondents.

b. Average score analysis

The Average score analysis is mainly used in any study is to assess the level of opinion/awareness/satisfaction of the different category of respondents on the various aspects relating to the study. First the opinion of the respondents are assessed through a scaling technique and then based on the consolidated opinion of the respondents, the average score is calculated.

In this study the opinion of the respondents are assessed through a scaling technique and then based on the consolidated opinion of respondents the average score is calculated and the results are presented in different tables with suitable interpretations.

The results of the average score analysis is presented for each of the classification of perception on behavioural self-efficacy of the respondents for the various aspects and the results are presented in different tables with suitable interpretations.

It describes the results of average score analysis for each personal classification of respondents on the level of behavioural self-efficacy related variables considered among people in Salem Corporation.

It is found from the results that the respondents irrespective of their perception on behavioural self-efficacy with respect to personal classification have given high level of opinion towards 'Change water in plant pot trays every week' (A1) followed by 'Clear drain from blockage every week' (A2) when compared to the other variables considered.

It is concluded that the majority of the respondents have high level of opinion towards 'Change water in plant pot trays every week' as an important variable in the perception on influencing the behavioural self-efficacy in the study of awareness and prevention of Dengue among people with special reference to Salem Corporation.

V. CONCLUSION

It is done over from this study that the height of awareness about dengue and preventive practices along with the study population is rather far above the ground. However, People expression challenges to obtain right information on Dengue. In Tamilnadu state, public health education programs assist peoples to enlarge knowledge and awareness of the Dengue. In our Government has also launched dissimilar awareness programs related to Dengue virus other than researches have not conceded out so far to make sure level of awareness of people in order to begin further campaigns. Taking this as a point of going away this study attempted to ensure level of awareness of people in Salem Corporation about Dengue. The results reveal that majority of the study population had knowledge of Dengue. However, from the results we bring to a close that people need special notice in future health education programmes. This study recommends a concerted attempt by all the stakeholders including Government, non- Governmental organizations and civil society in addressing this health aggressive issue. This study also suggests that comprehensive information about Dengue virus, its modes of programme and prevention measures need to be covered in awareness campaigns and workshops.

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