

A STUDY TO ASSESS THE EFFECTIVENESS OF INFORMATION BOOKLET ON KNOWLEDGE REGARDING JAPANESE ENCEPHALITIS AND ITS PREVENTION AMONG STUDENTS IN SELECTED SENIOR SECONDARY SCHOOL AT KANPUR UTTAR PRADESH

Shikha Sharma , Minu.S. R

Faculty of Nursing, Rama University Mandhana Kanpur UP, India.

ABSTRACT

Japanese Encephalitis, Known as “Plague of the Orient” is an important-emerging vector-borne zoonotic disease of the 21st Century. The objective is to assess the level of knowledge regarding Japanese Encephalitis and its prevention among students and to evaluate the effectiveness of an information booklet regarding Japanese Encephalitis and its prevention among students and to find out the association between knowledge score with their selected demographic variables of students in selected senior secondary school at Kanpur UP. A Quasi experimental one group pre- test post- test design with 60 senior secondary school students were selected by simple random sampling technique and data collection done by self-structured questionnaire regarding senior secondary school students. The mean score of post-test knowledge 28.31 (60.73%) was apparently higher than the mean score of pre-test knowledge 12 (41.86%), suggesting that the information booklet was effective in increasing the knowledge of the senior secondary school students regarding Japanese encephalitis and its prevention. The mean difference 16.31 between pre-test and post-test knowledge score of the senior secondary school students were found to be significant and there was no association between pre-test knowledge score and demographic variables among students of senior secondary school regarding Japanese encephalitis and its prevention.

Keywords: Knowledge, Senior secondary school students, Effectiveness, Prevention, Japanese encephalitis, Information booklet.

Introduction

Japanese encephalitis (JE) is a mosquito-borne flaviviral disease, primarily affecting children between the ages of 0 to 15 years and occasionally adults. The enzootic life cycle of the virus results in its transmission to vertebrate hosts by mosquitoes, mainly belonging to the *Culex* sp. Ardeid birds and bats serve as virus reservoirs. Humans are “dead end hosts” as the virus cannot be transmitted from one infected person to another.³

The first historic mention of Japanese encephalitis occurred during the “summer encephalitis” outbreaks in the late 1870s. The next documented epidemic in Japan occurred in 1924 with 6,125 human cases resulting in 3,797 human deaths (62% case- fatality rate). The virus was first isolated in 1935 from a fatal human case of encephalitis. In 1938, the virus was isolated from its primary vector species, *Culex tritaeniorhynchus*. The incubation period of J.E in humans is 6 to 8 days and disease varies from a febrile headache to an acute and possibly fatal encephalitis.⁵

The transmission of Japanese encephalitis depends on the season, the travel destination, the duration of stay, and which activities a traveler in Asia would be doing. The risk is highest during the transmission of season, but this varies from place to place in the following ways: In temperate regions, transmission is highest during the summer and early fall, between May and September. In subtropical and tropical areas, the season depends on the rainfall and patterns of bird migrations. In some tropical areas, transmission might occur at any time of the year, depending partly on agricultural practices. It is common in areas where people grow rice.⁶

Preventive measures are very important for minimizing JE infection. Vector control should include elimination of potential mosquito breeding areas such as standing or pooled water around homes and barns. Additionally, adult and larvacidal programs should be implemented to reduce mosquito numbers.¹⁰

NEED FOR THE STUDY

According to WHO, The incidence rate of reported cases of Japanese encephalitis in 2017 & 2016 were in the state of Bangladesh – 19 & 1294, in the state of Cambodia – 5 & 10, in the state of China – 1147 & 1130, in the state of Myanmar – 442 & 393, in the state of Philippines – 361 & 312, in the state of Srilanka – 23 & 21, in the state of Thailand – 28 & 21, in the state of Vietnam – 200 & 357.¹⁸

In India, Japanese Encephalitis was clinically diagnosed for the first time in 1955 at Vellore in North Arcot District Tamil Nadu. In 1973, the first major JE epidemic from India was reported in the Bankura and Burdwan districts of West Bengal where more than 700 cases and 300 deaths occurred. Subsequently, the second outbreak occurred in 1976 where number of death cases was reported.¹⁹

In India, the incidence rate of Japanese encephalitis, According to WHO monitoring in 2018, was reported 2043 cases in 2017, 1627 cases reported in 2016, 1620 cases reported in 2015, 1657 cases reported in 2014. The cases reported in the year of 2018 all around India were as follows. 4 cases of Japanese encephalitis detected in Nagapattinam since November 2018. An immunization drive will be carried out in Nagapattinam. Pune: With 108 patients, Japanese encephalitis spreads beyond the endemic zone Japanese encephalitis has emerged as a potential threat in Maharashtra this year. The State has recorded 108 cases of the disease, mainly in endemic districts, in the past 11 months as against 30 recorded throughout 2017. Out of the 108; six were symptomatic and needed immediate treatment for the viral infection. The state had for the first time reported cases in Pune in 2016 and 2017. A nine year old boy died of the disease in Sholapur in 2017. This was the first time in western Maharashtra that cases of J.E were detected.²¹

PROBLEM STATEMENT

“A Study To Assess The Effectiveness Of Information Booklet On Knowledge Regarding Japanese Encephalitis And It’s Prevention Among Students In Selected Senior Secondary School At Kanpur”

OBJECTIVES OF THE STUDY

1. To assess the level of knowledge regarding Japanese encephalitis and its prevention among students in selected senior secondary school at Kanpur.

2. To evaluate the effectiveness of an information booklet regarding Japanese encephalitis and its prevention among students in selected senior secondary school at Kanpur.

3. To find out the association between the knowledge score with their selected demographic variables of students in selected senior secondary school at Kanpur.

RESEARCH HYPOTHESIS

H1: There is significant difference between pre and post -test knowledge scores of students of senior secondary school regarding Japanese encephalitis and its prevention.

H2: There is significant association between knowledge scores of students regarding Japanese encephalitis and its prevention with their selected demographic variables.

METHODOLOGY

Research Approach:- Quantitative evaluative research approach

Research Design:- Quasi-experimental research design

Sample:- students of senior secondary school,

Sample size:- 60 Sample

Sample techniques:- simple random technique was used to select the sample.

DESCRIPTION OF TOOL:

The research tool consists of two sections:

Section A: Demographic data of senior secondary school students such as age, gender, standard, religion, type of family, monthly family income, attending any teaching programme on Japanese encephalitis, source of information.

Section B: Structured knowledge Questionnaire contained 34 questions related to knowledge of senior secondary school students regarding Japanese encephalitis definition, causes, signs and symptoms, management, prevention.

Scoring of the items

Table: 1 Grading of knowledge score

S.NO.	Level of knowledge	Scoring
1	Inadequate	< 50%
2	Moderate	51-75%
3	Adequate	>75%

RESULTS

Section A: Frequency and percentage wise distribution of demographic variable of senior secondary school students.

Section B: Assessment of knowledge regarding Japanese encephalitis and its prevention among senior secondary school students.

Section C: Effectiveness of information booklet on knowledge regarding Japanese encephalitis and its prevention among senior secondary school students.

Section D: Association of the pre-test level of knowledge regarding Japanese encephalitis and its prevention among senior secondary school students with their selected demographic variables.

Table no. 2: Frequency and percentage wise distribution of senior secondary school students according to their age groups.

S.NO.	AGE	FREQUENCY	PERCENTAGE
1	15-16	35	58.33
2	17-18	25	41.67
3	TOTAL	60	100

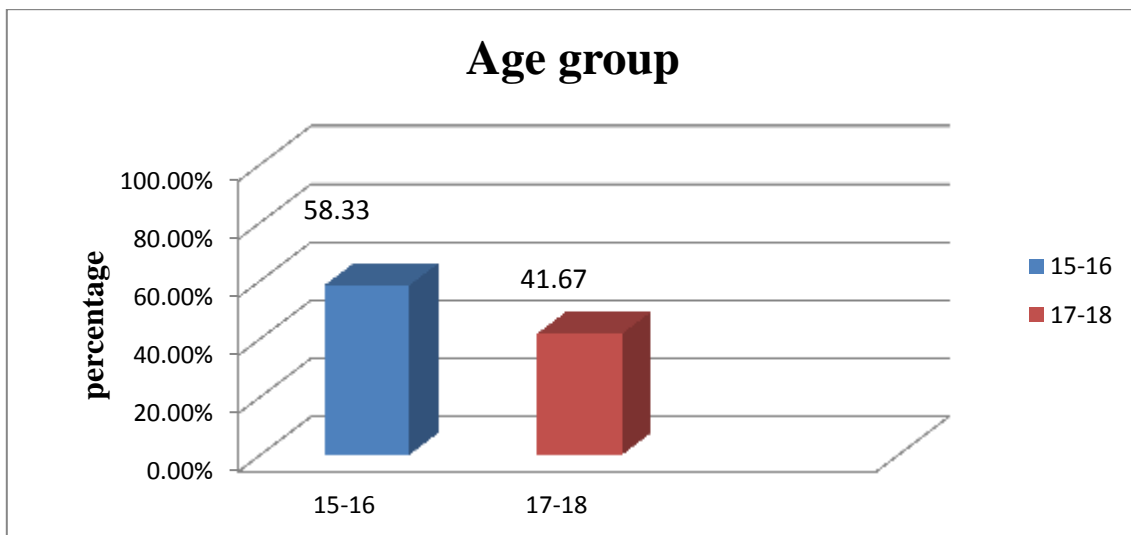


Figure no.1: Bar diagram showing percentage wise distribution of senior secondary school students according to their age.

SECTION B

Table no. 3: Distribution of knowledge of students according to pre-test mean, SD

S.NO.	Maximum score	Pre test	
		Mean	SD
1	34	12	3.35

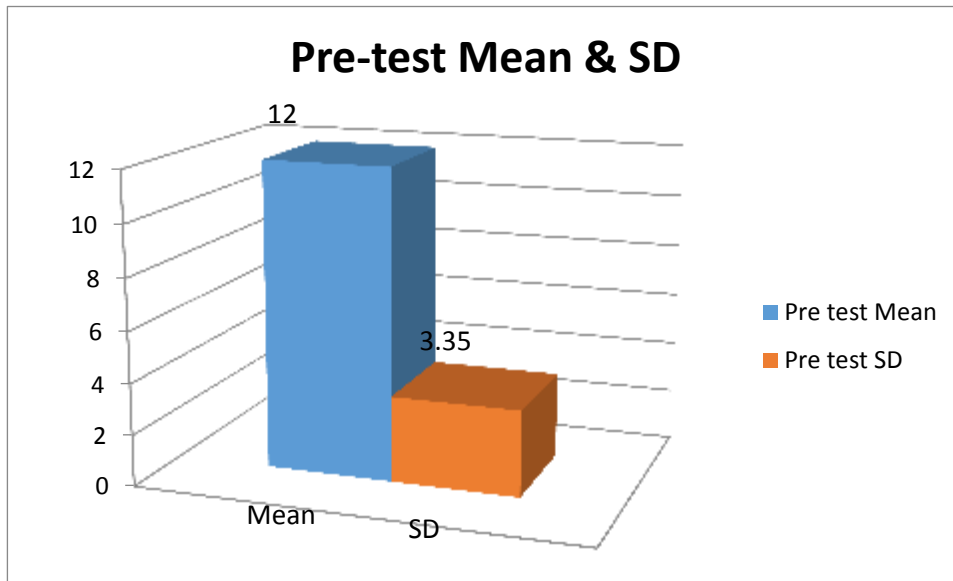


Figure no. 2: Bar diagram showing percentage distribution of students of pre-test mean, SD.

Table no. 4: Distribution of knowledge of students according to post-test mean, SD.

Post-test

S.NO.	Maximum score	Post test	
		Mean	SD
1	34	28.31	2.23

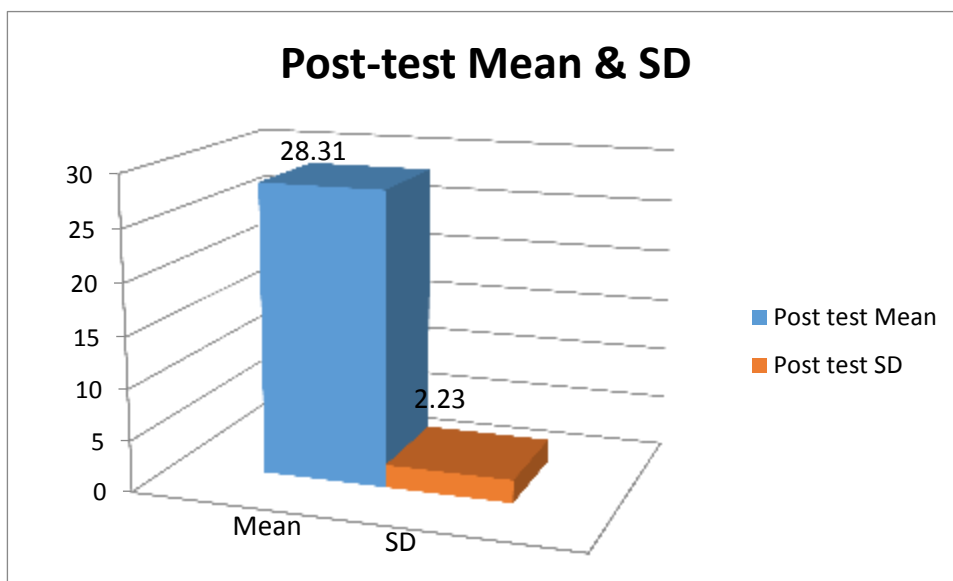


Figure no. 3: Bar diagram showing percentage distribution of students of post-test mean, SDSECTION C

Table no.5: of knowledge regarding Japanese encephalitis and its prevention among senior secondary school students.

S.NO.	Level of knowledge	Range of score %	Pre test		Post test	
			frequency	percentage %	frequency	percentage %
1	Inadequate knowledge	< 50	56	93.33	0	0
2	Moderate knowledge	51-75	4	6.67	13	21.67
3	Adequate knowledge	> 75	0	0	47	78.33
			60	100	60	100

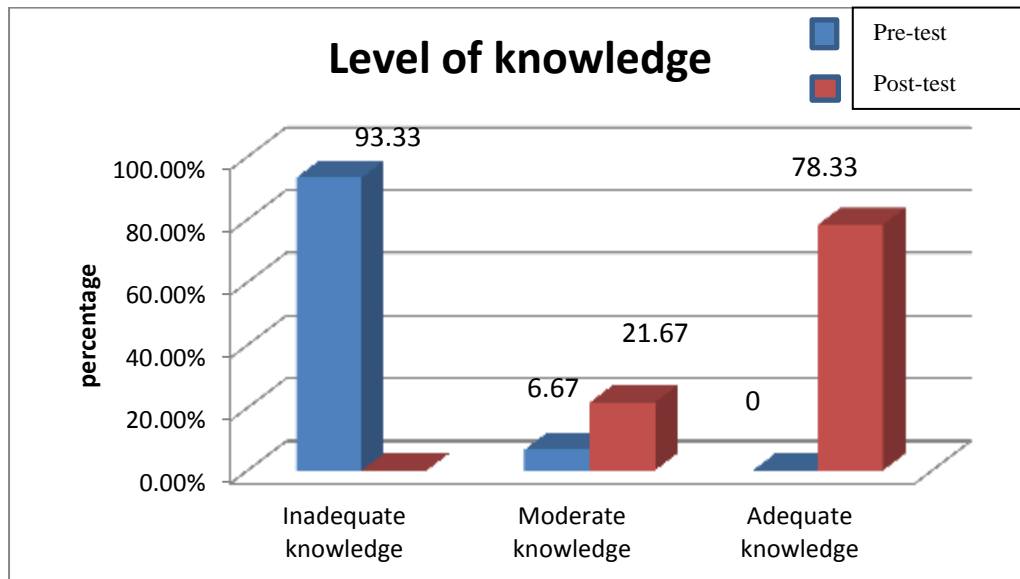
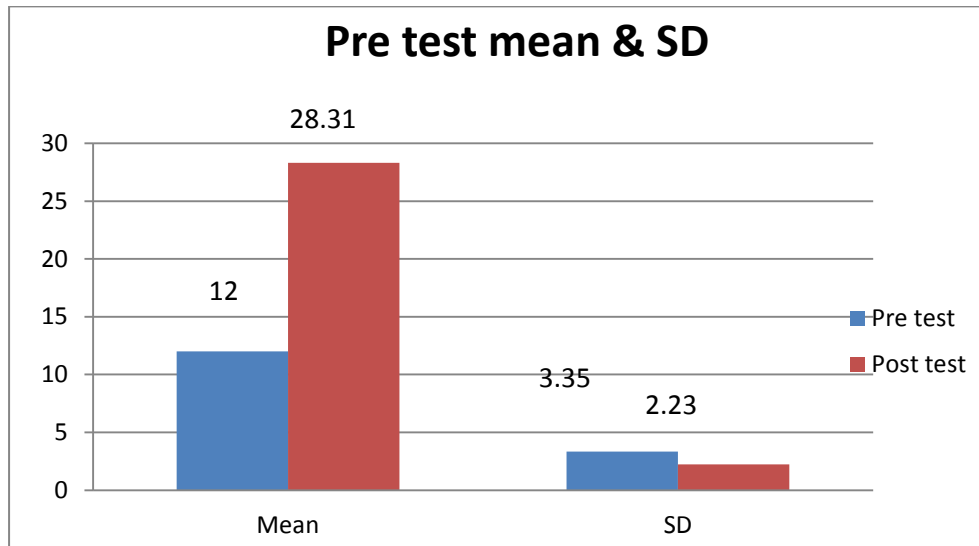


Figure no.4: Bar diagram showing percentage wise distribution of senior secondary school students according to their level of knowledge score.

Table no. 5: Comparison of knowledge of students according to pre-test & post-test mean, SD.

S.NO.	Maximum score	Pre test		Post test	
		Mean	SD	Mean	SD
1	34	12	3.35	28.31	2.23

**Figure no. 5: Bar diagram showing percentage distribution of students of pretest & posttest mean, SD.****Table no.6: Paired t value of pre and post knowledge score**

S.NO.	AREA	t' VALVE	DF	REMARKS
1	Effectiveness of information booklet	58.38	59	Significant

$T (59) = 2.00$ at 0.05 significance level

SECTION – D

Association of the pre-test level of knowledge regarding Japanese encephalitis and its prevention among senior secondary school students with their selected demographic variables.

Table no.7: Association between pre-test score of the students with their selected demographical variables

S.N	Variables	Adequate	Moderate	Inadequate	X ²	D.F	Level of significance
1	AGE (in years)				1.07	2	1.07<5.99
	a)15 to 16	0	1	29			T _{cal} <t _{tab}
	b) 17 to 18	0	4	27			NS
2	GENDER				4.16	2	4.16<5.99
	MALE	0	1	41			T _{cal} <t _{tab}
	FEMALE	0	3	15			NS
3	STANDARD				1.04	2	1.04<5.99
	11TH	0	1	27			T _{cal} <t _{tab}
	12TH	0	3	29			NS
4	RELIGION				.054	6	.054<12.59
	HINDU	0	4	51			T _{cal} <t _{tab}
	MUSLIM	0	0	5			NS
	CHRISTIAN	0	0	0			
	OTHERS	0	0	0			
5	TYPES OF FAMILIY				1.20	4	1.20<9.49
	NUCLEAR	0	2	28			T _{cal} <t _{tab}
	JOINT	0	1	23			NS
	EXTENDED	0	1	5			
6	MONTHLY INCOME				.38	6	.38<12.59
	LESS THAN RS.10000	0	1	9			T _{cal} <t _{tab}
	RS.10001 TO 20000	0	1	17			NS
	RS.20001 TO 30000	0	1	19			
	RS.30001 TO 40000	0	1	11			
7	ATTEND ANY TEACHING PROGRAM				1.58	2	1.582<5.99
	YES	0	1	4			T _{cal} <t _{tab}
	NO	0	3	52			NS
8	SOURCE OF HEALTH INFORMATION				.601	4	.601 <9.49
	MASS MEDIA	0	1	15			T _{cal} <t _{tab}
	FAMILY & FRIENDS	0	1	23			NS
	HEALTH PROFESSION	0	2	18			

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NS= NOT SIGNIFICANT

S= SIGNIFICANT (level of significant P = 0.05)

CONCLUSION

From the finding of the present study, it can be concluded that information booklet has found to be effective in significance gain in the knowledge among students of senior secondary schools.

Prior to administration of information booklet to students had total mean score 12.0, whereas after the administration of information booklet to students had total mean score 28.31 which had revealed gain in the knowledge among students after administration of information booklet. There was significant difference found with mean difference of (16.31) between the pre-test and post-test knowledge score among students of senior secondary schools.

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